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## It's not rocket science: NASA's crisis communication efforts as a public sector organization following the Columbia shuttle disaster

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IT'S NOT ROCKET SCIENCE: NASA'S CRISIS COMMUNICATION EFFORTS AS A  
PUBLIC SECTOR ORGANIZATION FOLLOWING THE COLUMBIA SHUTTLE  
DISASTER

A Thesis  
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in

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by  
Emily Ann Schult  
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## **ABSTRACT**

Seventeen years after the Challenger accident, the space shuttle Columbia and its crew were only forty miles from Kennedy Space Center when the shuttle exploded during re-entry to the Earth's atmosphere. The explosion killed all seven astronauts onboard. NASA, the National Aeronautics and Space Administration immediately jumped into action, declaring a contingency and following the Agency Contingency Action Plan for Space Flight Operations. As a public sector organization, one that must report to Congress and the American public, NASA is held to different standards than private organizations when it comes to releasing information. To understand how public sector organizations handle crises, the strategies and tactics NASA used following Columbia and how closely the agency followed the contingency plan, this study takes a look at NASA from an internal perspective using interviews with six people who were NASA employees at the time of Columbia and one journalist who covered the story. Through the interviews those who were there and handled the crisis explained that they followed the plan very closely, but that the key in having a plan is to allow for flexibility and to make sure employees understand how the plan works by holding rehearsals. Tactics used during Columbia included everything from press releases to press conferences, with NASA Web site playing a crucial role in the dissemination of information. NASA chose the strategy of open and honest communication following Columbia, which served the agency well, earning it praise from the media and the public. This idea of open and honest, or transparent, communication was crucial for NASA as a public sector organization and the organization provides a model for communication following a crisis that other public sector organizations could follow.

## **CHAPTER 1: INTRODUCTION**

In 1610 German astronomer Johannes Kepler sent a letter to fellow astronomer Galileo Galilei. In it he wrote, “As soon as somebody demonstrates the art of flying, settlers from our species of man will not be lacking on the moon and Jupiter. Given ships or sails adapted to the breezes of heaven, there will be those who will not shrink from even that vast expanse” (Space Quotes, 2007). Even in the 1600s people were looking at space as the final destination of exploration. Over three hundred years later humans were finally able to begin the discovery of “that vast expanse.” NASA, the National Aeronautics and Space Administration, was vital in supplying the technology that finally put man in space and to the moon. However, NASA has faced tragedies in its mission to explore space. Four tragedies have rocked NASA’s history. The Apollo1, Apollo 13, Challenger and Columbia missions are all considered tragedies in NASA’s history with three of the disasters ending in the deaths of all crewmembers on board.

Following the tragedies, NASA was forced to utilize crisis communication strategies with both its internal and external audiences. However, its strategies were not always effective. Criticized after Apollo 1 and Challenger and praised after Apollo 13 and Columbia, some of NASA’s crisis communication strategies proved ineffective or non-existent.

As a government, or public sector, agency NASA receives funding from Congress and by law is required to keep Congress and the American public informed of its actions in order to continue its funding (Kauffman, 1999). NASA faces a different set of challenges than organizations in the private sector including reporting to the highest levels of authority, Congress and the President. This study looks at the history of NASA’s tragedies, its crisis communication responses after Apollo 1, Apollo 13, Challenger and Columbia and explains the importance of a well-planned crisis communication plan for all organizations.

The purpose of this study is to give a detailed historical description of four of NASA's most severe catastrophes and analyzes its crisis communication strategies before, during and after those events. The study builds upon the work of Kauffman (1997, 1999, 2001, 2005) and Martin and Boynton (2005), but will go further in explaining the crisis situations, the strategies and tactics NASA used and the implications of the communications decisions made during the time of the crises. It adds to the already strong body of research by providing in-depth interviews with key NASA officials, NASA employees and media personnel, giving the subject the internal perspective that has been lacking.

The interviews focus on the crisis communications strategies surrounding the Columbia shuttle disaster. Little research has been done about the Columbia shuttle disaster, with most researchers focusing on the Challenger disaster. This study will add to the body of research on NASA's crisis strategies giving particular focus to Columbia through interviews and a critical analysis of NASA's Agency Contingency Plan for Space Flight Operations. The interviews communicate a stronger understanding of NASA's preparations for possible disasters, how officials handled the situation during the exact time of the crisis, what the officials thought could have been done better and what changes may be made in the future to better handle crisis situations. Unlike previous research, using interviews with key NASA officials will give a better understanding of the agency from an internal perspective and will give other public relations and crisis communications specialists a look inside a public agency that has dealt with a crisis situation. Through the interviews this study seeks to understand how NASA was better able to handle the Columbia shuttle disaster based on lessons learned during and after the three previous disasters. The study also adds to the research surrounding communication in the public sector, an area that is surprisingly lacking in information. This study is significant because it further

illuminates that crisis communication plans are vital to the extended well being of an organization and it illustrates how other public sector organizations can learn from NASA's many mistakes.



## **CHAPTER 2: LITERATURE REVIEW**

### **Brief History of NASA**

Congress and President Eisenhower, as an additional means of national defense, created the National Aeronautic and Space Administration (NASA) on October 1, 1958, which absorbed the National Advisory Committee for Aeronautics. Following World War II the United States and Russia engaged in the Cold War and both countries struggled for dominance in space exploration. When the Soviets launched the world's first artificial satellite, Sputnik 1 on October 4, 1957, the United States quickly realized the need for a federal agency capable of researching and exploring space. In response the United States launched Explorer 1, its first Earth satellite on January 31, 1958. In the late 1950s and early 1960s the United States began to send similar satellites to the Moon and other planets.

In the early 1960s NASA began experimenting with the idea of sending humans into space. Alan B. Shepard Jr. became the first American in space after riding in a Mercury capsule during a 15-minute suborbital flight on May 5, 1961. On February 20, 1962, John H. Glenn Jr. became the first American to orbit the Earth. NASA used Mercury's successes to create Project Gemini, which helped NASA scientists and engineers further understand weightlessness, proper reentry and splashdown procedures and "rendezvous and docking in space" (Garber & Lanius, 2005). Following Mercury and Gemini NASA launched Project Apollo on May 25, 1961 after President John F. Kennedy announced, "I believe that this nation should commit itself to achieving the goal, before this decade is out, of landing a man on the Moon and returning him safely to Earth" essentially challenging the Soviet Union in a race to the moon (Garber & Lanius, 2005).

Following Kennedy's announcement NASA spent the next 11 years and more than \$25

billion making his dream a reality. After the success of Apollo 7 and Apollo 8, Apollo 11 landed on the Moon on July 20, 1969. Astronauts Neil A. Armstrong and Edwin E. “Buzz” Aldrin, Jr. became the first humans to stand on the moon and Armstrong uttered his now famous words, “That’s one small step for [a] man, one giant leap for mankind” (Garber & Lanius, 2005). Following years of hostility between the two countries, in 1975 the United States and the Soviet Union launched the Apollo-Soyuz Test Project, the first international spaceflight. In 1981 NASA used its first Space Shuttle, which could be launched vertically, but land horizontally like an airplane. Two years later Sally K. Ride became the first American woman in space.

Other NASA activities included maintaining a permanent human presence in space. Congress gave NASA authorization in 1984 to build a space station. After a number of redesigns, Russia teamed with the United States and other countries in 1993 to build the International Space Station with permanent habitation beginning on November 2, 2000. NASA has also sent many probes into space to explore the Moon, planets and far-reaching areas of the solar system. The most famous of the probes, the Hubble Space Telescope, launched in 1990 and orbited the Earth. NASA also sent an orbiter to Mars to gather information on the red planet, however the orbiter disappeared into space. The Mars Global Surveyor was launched on November 7, 1996 and continues to map Mars today. NASA also landed the Mars Pathfinder and its miniature rover, Sojourner, on Mars on July 4, 1997. President George W. Bush announced on January 14, 2004 a new Vision for Space Exploration. The new plan includes sending astronauts back to the Moon and landing them on Mars. The plan also proposes retiring the space shuttle and developing a new craft named the Crew Exploration Vehicle (Garber & Lanius, 2005). Missing from this brief history is any mention of the four largest disasters faced by NASA. These disasters will be discussed in detail later in the study.

## **Theoretical Framework**

### Effective Crisis Communication

All organizations will more than likely face some kind of crisis in their history. Although a difficult time for an organization some view a crisis as simply one stage in an organization's lifecycle. Weick (1995) said that what is important is not the actual crisis, but how an organization deals with the crisis. Effective crisis communication plans can have a large impact on how successfully an organization can handle a crisis. Without a crisis communication plan in place organizations have to scramble to find ways to communicate with both internal and external audiences. The way an organization handles a crisis can also have a large impact on its image.

Fearn-Banks (2007) identifies three possible outcomes for organizations in crisis. The first and most severe outcome includes legal ramifications for both the organization and its leaders and often results in the organization going out of business. A less severe outcome is when an organization continues to exist, but loses credibility with its publics, which, in turn, may cause financial difficulties for the organization in the future. The outcome every organization hopes for is to come out of a crisis situation as favorable or more favorable with its publics as it was before the crisis.

There is an increasing amount of literature on crisis communication and image restoration. Before further discussing crisis communication it is important to understand what past researchers have defined as a crisis. Hermann (1972) defines a crisis as "a situation that threatens high-priority goals of the decision-making unit, restricts the amount of time available for response before the decision is transformed and surprises the members of the decision-making unit by its occurrence" (p. 13). Similarly Fearn-Banks (2007) describes a crisis as "a

major occurrence with a potentially negative outcome affecting the organization, company, or industry, as well as its publics, products, services, or good name,” causing interruptions in business and threats to the organizations very existence (p. 8). Fearn-Banks (2007) also lists the five steps of a crisis: detection, prevention/preparation, containment, recovery and learning. Coombs (2004) identifies crises as “sudden and negative” (p. 267). Finally, Schannon (2006) writes that a crisis can be defined as “A cascading, ongoing trauma that significantly and dramatically violates the trust between an organization and its audiences” (p. 15). These definitions of crises should be remembered when discussing organizational crisis, crisis communication and crisis communication strategies. Coombs (1995) breaks crises into unintentional and intentional crises and then into internal and external crises. This created a matrix of four types of crisis: accidents (unintentional and internal), transgressions (intentional and internal), faux pas (unintentional and external) and terrorism (intentional and external).

Pearson and Mitroff (1993) define organizational crisis as an incident or event that poses a threat to the organization’s reputation and viability. They composed five dimensions of crises including: that they are highly visible, require immediate attention, contain an element of surprise, have a need for action and are outside the organization’s complete control. Other researchers have also defined crisis communication in similar terms (Coombs, 1998; Barton, 2001; Benoit, 1995). Four elements can be used to determine how much of a threat the crisis will be to an organization. The four elements are crisis type, severity of damage, crisis history and relationship history (Coombs, 2006). Coombs and Holladay (1996) developed three options or strategies that an organization in crisis could utilize. The first is to establish that there is no crisis. The second is to alter the crisis and make it appear less negative to organizational

stakeholders. The third strategy is to alter the perception stakeholders have of the crisis and work to protect and repair the organization's reputation.

Fearn-Banks (2007) identifies crisis communication as “the dialogue between the organization and its public prior to, during and after the negative occurrence” (p. 9). The dialogue includes communication that will “minimize damage to the image of the organization” (p. 9). Huang, Lin and Su (2005) defined crisis communication strategies as “the actual verbal and nonverbal responses an organization uses to address a crisis” (p. 231). Coombs (1998) developed a continuum of crisis communication responses and arranged the seven crisis communication strategies on a continuum in order from defensive to accommodative. The crisis communication strategies include: attack the consumer by aggressively denying claims of a crisis and punish the accuser; denial claims there is no crisis or that the organization is uninvolved in the crisis; excuse admits there is a crisis but minimizes organizational responsibility for the crisis; justification admits a crisis exists but downplays its severity; ingratiation tries to create positive impressions of the organization by reminding stakeholders of past good works, associate the organization with positive qualities or both; corrective action attempts to repair crisis damage, prevent a repeat of the crisis, or both; and full apology and mortification take responsibility for the crisis (p. 180). Marcus and Goodman (1991) used a similar continuum. They explained that strategies that take responsibility or take action are accountable strategies while defensive strategies refuse to believe there has been a crisis or deny responsibility for the crisis.

Huang, Lin and Su (2005) list five crisis communication strategies. Denial includes statements made by the organizations that completely deny the “occurrence or existence” of the crisis, event or cause of the event (p. 235). Excuse statements “argue that the accused person

should not be held responsible for the occurrence and/or impact the questionable event because certain factors limited the person's control over the occurrence and/or impact of the event” (p. 235). Justification statements made by organizations admit that the accused may be responsible for the crisis, but “the standards being used by the accusers to evaluate the impact of the questionable event are inappropriate” (p. 236). Concession statements admit that the event happened and that the accused person or organization “caused the event, apologized, and expressed the willingness for remediation, rectification and proactive works, changed corporate policy, and provided adaptive and/or instructive information” (p. 236). The author’s final crisis communication strategy, diversion, states that organizations try to divert attention away from the crisis by distracting the public and the media by “creating a different issue or temporarily easing public anger by showing regards (while not apologizing)” (p. 236).

Benoit (1995) developed the theory of image restoration, which is the use of communication strategies to redress the wrong doings of a crisis. He identified five image restoration strategies including: denial, evasion of responsibility, reducing the offensiveness of the act, corrective action and mortification. Finally Kauffman (2000), author of many articles of NASA’s communication strategies developed three rules of crisis communication that organization should do including: respond quickly, tell the truth and provide a constant flow of information, especially to key publics. While dealing with a crisis once it happens is important, organizational leaders should also engage in crisis management. Fearn-Banks (2007) defines crisis management as “a process of strategic planning for a crisis or negative turning point, a process that removes some of the risk and uncertainty from the negative occurrence and thereby allows the organization to be in greater control of its own destiny” (p. 9). If organizations

engage in crisis management, more crises may be averted.

### Communicating in the Public Sector

Few researchers have focused on communication in public sector organizations, however it is important to understand the impact of these organizations on every day life. Almost 20 percent of the population works for a public organization and every citizen's life is impacted by the activities of these agencies (Graber, 1992, p. 3). Public organizations are "institutions established by government at various levels to carry out governmental functions" and include administrative departments and agencies at the federal, state and local levels (Graber, 1992, p. 8). As part of the political system, the "structure, resources, personnel, goals and even day-to-day decisions" of public organizations "are shaped by political events" (p. 8).

Public organizations are often forced to adjust their goals depending on the political climate of the time. According to Graber (1992), organizations will align themselves with certain political leaders in order to gain increased financing. Because of this, public organizations are often highly concerned about their image with the heads of the agencies often striving for "fast and visible demonstrations of progress" (Graber, 1992, p. 11). Some researchers cite NASA's concern about its image as a major factor in the 1986 Challenger explosion. Graber (1992) writes that top administrators may have ignored safety concerns that would have delayed the shuttle launch in order to prove NASA's ability to succeed with an on-time launch.

Public and private sector organizations also have different ways to measure success. Public sector organizations often measure success in terms of the breadth of the mission given to them by the government, the size of their budgets and staff and the amount of satisfaction given to their clients (Graber, 1992). Public sector organizations also operate in the open, meaning that

public sector organizations are responsible for informing the public of their actions. The media and interest groups are often able to perform this function for the public (Graber, 1992).

However public organizations must walk a fine line between revealing too much information, under the Privacy Act of 1974, and not divulging enough information, under the Freedom of Information Act.

A final challenge often faced by public organizations is a high rate of turnover at the top of the chain of command. Many top administrators are political appointees who stay for an average of only 22 months in their posts (Graber, 1992). Many administrators are not in office long enough to gain a full understanding of their agency, let alone the complicated communication processes of the agency. This can create an atmosphere of low morale within the agency, sometimes causing lower level administrators to hold back information because of a lack of trust with the field of rotating top administrators.

Due to the lack of research on public sector organizational communication there are few theories or models that focus on public sector organizational communication. Garnett (1992) developed a strategic contingency model of government communication. He writes, "Effective government communication involves analyzing situations and designing appropriate strategy" (p. 35). The strategic contingency model begins with four situational factors. The first called objectives for communicating includes: to inform, to influence attitudes and to affect behavior. The second objective, audience, includes factors surrounding what an organization needs to know about its audience including position, background, role, interests, knowledge, needs and impact. The third objective, the management situation includes the organizational strategy, nature of routine, organizational climate, organizational state, leadership styles, mission and culture, political environment, technological capability and organizational communication. The



final objective includes the position, ability, credibility, interests, influence, background and preferences of the sender. These four objectives influence two strategy design factors, which are the selection of the medium and the crafting of the message. When devising a message the sender must take into consideration the messages content, organization, tone, analysis, style, length and timing. Depending on the type of message the choice of media can become important. Different types of media may include letters, memos, reports, proposals, cables, releases, newsletters, meetings, briefings, telephone conversations, computer correspondence and body language. “Both situational factors and strategy design influence communication and management outcomes—government results” (37). This model can help government officials better communicate with those in their organizations.

## **History of NASA Disasters**

### Apollo 1

Nine years after its conception NASA faced its first major tragedy when a fire broke out in the capsule of Apollo 1, killing all three astronauts onboard. The disaster happened at 6:31 p.m. on January 27, 1967 at Cape Kennedy during a routine preflight test. The fire killed astronauts Gus Grissom, Ed White and Roger Chaffe. Investigations determined that a spark in the wiring mixed with the pure oxygen in the hatch caused the fire to spread quickly. The astronauts had no chance of getting out alive (Kauffman, 1999).

After using excellent public relations strategies to promote the Mercury and Gemini space programs, NASA’s public relations and crisis communication efforts following Apollo 1 were unsuccessful. NASA failed to utilize the three basic steps organizations in crisis should use: respond quickly, tell the truth and provide a constant flow of information (Kauffman, 2000). NASA waited two hours to report the deaths of the three astronauts, gave the press misleading

information while refusing to release other information and instituted an investigative board made up entirely of people with close ties to NASA and the Apollo 1 mission. NASA argued that the two-hour news blackout was due to an inability to reach the wife of one of the astronauts; however the policy caused the media to speculate that NASA was trying to cover-up the accident. As a result of the media blackout, the media went to other sources for information. When NASA finally released information it said, “There has been a fatality” then later revised its statement to say, “There has been fatality.” This mistake made those in the media suspicious and led them to doubt NASA’s response to the disaster.

NASA lost more credibility with the media when officials said an internal power source was involved in the fire, however the power source had nothing to do with the accident. Later in the day, NASA officials met with President Lyndon Johnson and asked that they be able to appoint their own review board. The board, made up entirely of NASA officials, drew scrutiny from the media, Congress and the American public. Once the committee was organized NASA decided to withhold all evidence and information from the press until the investigation was completed. Officials asked all NASA personnel not to comment on the fire until the review board had concluded its investigation. After an uproar from the media NASA finally allowed one reporter, George Alexander, to view Apollo 1.

NASA hoped that the release of its report, named the Apollo 204 Report, would satisfy the media, Congress and the American public and help restore its credibility. In his own report Apollo Program Director Major General Samuel Phillips pushed most of the blame to contractors North American Aviation, the manufacturers of Apollo 1’s capsule. When the reports were published, it was determined that NASA lied in both reports and to tried to keep its Apollo 204 Report hidden, decreasing its credibility with the media, Congress and the American public yet

again. It was also discovered that the two reports did not correlate, making both untrustworthy. Also in testimony before Congress, Phillips, NASA Administrator James Webb and other NASA officials lied to Congress about the accident. The media fired back with articles and editorials criticizing NASA for lying and misleading them and the American public. To push attention away from its problems NASA tried to get the media to focus on the future of the space program including plans for future space flights and the possibility of a moon landing. However, the media were not fooled by NASA's plans and continued to criticize the organization by stating that it should not plan for new flights until it was able to solve the problems brought up by Apollo 1.

NASA's Assistant Administrator for Public Affairs Julian Scheer said that the organization had contingency plans for disasters in space, but none for emergencies on the ground. By not being prepared with a crisis communication plan, NASA was not ready for the fire that broke out aboard Apollo 1. The agency's poor communication efforts following the accident prolonged the crisis (Kauffman, 1999). Had NASA reported the facts concerning the accident, not speculated on its cause, not lied to the media and Congress and assumed responsibility the crisis would have passed much faster. NASA learned its lesson the hard way and three years later utilized what it had learned from Apollo 1.

### Apollo 13

Only three years after the Apollo 1 disaster NASA faced another crisis when astronaut Jim Lovell uttered the now famous words, "Houston, we've had a problem," on April 13, 1970 (Kauffman, 2001). Although previously ignored by most media and a majority of the American public, the plight of astronauts Lovell, Fred Haise and John Swigert was soon broadcast on nearly all television and radio stations and reported on by countless newspapers and magazines.

For four days the world waited to see if the astronauts would be able to make a safe return to Earth. It was determined after much deliberation that a problem originating in the oxygen tanks mixed with other slight failures in the mechanical systems led to an explosion, crippling the spacecraft. NASA, Congress and the media would ultimately give the ordeal the name “A successful failure” when the three astronauts returned safely to Earth (Kauffman, 2001).

Learning from its mistakes with Apollo 1, NASA followed the three steps of crisis communication by responding quickly, telling the truth and providing a constant flow of information. After Apollo 1, NASA developed a crisis communication plan. Part of the new plan allowed two reporters to listen in on the communications between the astronauts and mission control. When NASA determined that a disaster had occurred, two reporters, one print and one broadcast, were allowed into mission control. NASA continued to give the media information by scheduling a press conference at 12:20 a.m. only three hours after the problem with Apollo 13 was reported. NASA was praised for its prompt and candid response to the problem. NASA refused to speculate on the current situation or the future of the space program and gave the media strictly facts. High- ranking officials and former astronauts were used as the spokespersons for the agency. However by using many people to speak for the agency, NASA ran into the problem of the organization not speaking as one voice. NASA Administrator Thomas Paine had to correct comments made by Director of Flight Crew Operations Deke Slayton and Apollo 13 astronaut Jim Lovell (Kauffman, 2001).

Bolstering was a favorite public relations strategy NASA and President Richard Nixon employed during the Apollo 13 disaster. Using the “frontier narrative” and “characterizing Apollo 13 as a success” NASA was able to bolster their image (Kauffman, 2001). They also made space exploration feel American and promoted the triumph of man over machine. Only

thirty minutes after the crew landed NASA appointed a review board to investigate the cause of the failure, but this time the board was made up of people outside the organization and NASA employees who were not directly responsible for Apollo 13. The rhetoric used by NASA, including the phrase “successful failure” was picked up by the media and Congress. The media portrayed all of the astronauts as heroes. Finally Congress gave NASA more money the year after the crisis than it had any other year. NASA’s image had plummeted after Apollo 1, but rebounded after Apollo 13 (Kauffman, 2001). Nearly sixteen years later its image would be tarnished yet again.

### Challenger

After three days of bad weather the space shuttle Challenger finally took off from Kennedy Space Center on January 28, 1986. Sixteen years after NASA’s last crisis and 73 seconds after takeoff the space shuttle exploded only 10 miles off the Earth’s surface. All seven of the astronauts on board were killed in the blast. Investigations eventually determined that an oxygen ring seal on the right side of the solid-fuel rocket malfunctioned because of the cold weather the day of the launch (Martin & Boynton, 2005; Cabbage & Harwood, 2004; CAIB, 2003).

Although NASA had a contingency plan for disasters the organization did not utilize the plan during the Challenger disaster. NASA failed to hold regular press conferences, kept information from the media and made NASA personnel unavailable for questioning. Unlike during Apollo 13 reporters were not allowed into mission control once a disaster scenario was determined. When press conferences were finally held, NASA limited the statements to just a few sentences, and took few, if any, questions. All personnel were asked not to talk to reporters. Spokespersons ranged from top NASA officials to unnamed NASA officials to general

spokespersons. The range of spokespeople led NASA to not speak in a unified voice, limiting its ability to maintain a constant flow of information to reporters. After disastrous public relations strategies following the Challenger disaster NASA would face another tragedy less than twenty years later, however this time the agency would utilize its crisis communication plan (Martin & Boynton, 2005; Kauffman, 1997; CAIB, 2003).

### Columbia

Seventeen years after Challenger at 9:10 a.m. on February 1, 2003, the space shuttle Columbia and its crew were only forty miles from Kennedy Space Center when the shuttle exploded during re-entry to the Earth's atmosphere. The explosion killed all seven astronauts onboard (Martin & Boynton, 2005; Kauffman, 2005; Cabbage & Harwood, 2004). On February 2, The New York Times released excerpts from a NASA news conference at Johnson Space Center. Ron Dittmore, the shuttle program manager said "The first indications of a potential problem occurred minutes before 8 o'clock Central Standard Time. The first indications were of the loss of sensors, temperature sensors in the hydraulic systems on the left wing, both the left on board and the left outboard 11 temperature sensors. They were followed seconds and minutes later by several other problems, including the loss of tire pressure indications on the left main gear and ten indications of excessive structural heating." (The New York Times, 2003)

Dittmore, however did not speculate on the cause of the accident, explaining that it would take time and extensive investigation before NASA understood the cause of the accident. Debris from the shuttle spread across several hundred miles covering parts of Texas and Louisiana. It was later determined that a foam strike was the cause of the explosion (Martin & Boynton, 2005; Kauffman, 2005; CAIB, 2003). Following the accident many people wondered about the possibility that something could have been done to prevent the accident. However, NASA

officials said, “Even if flight controllers had known for certain that protective heat tiles on the underside of the space shuttle had sustained severe damage at launching, little or nothing could have been done to address the problem” (Chang, 2003). In addition officials revealed that it took a frame-by-frame review of videotape the day after launch to determine that foam had hit the orbiter. Re-entry at that time would have posed the same risks as it did at the time of the accident.

Unlike past disasters in NASA’s history the media were able to report the explosion of Columbia the moment it happened. Thanks to NASA Administrator Sean O’Keefe NASA was able to follow a carefully detailed crisis plan. The Agency Contingency Plan for Space Flight Operations, put into place after O’Keefe’s arrival in 2001, was updated after every flight to ensure that it covered all possible emergency scenarios. The ways in which NASA was able to successfully handle the crisis are discussed in detail later in the study.

### **Agency Contingency Plan for Space Flight Operations**

NASA’s crisis plan, the Agency Contingency Action Plan for Space Flight Operations (2003) details how the organization handles crisis situations. Put into place shortly after Administrator Sean O’Keefe arrived in 2001, NASA relied heavily on the plan during the Columbia disaster. The Agency CAP for SFO details the responsibilities of the NASA Administrator, the Associate Administrator for the Office of Space Flight, NASA Headquarters, OSF Field Centers, the Office of Space Flight Programs and any contractor personnel during a crisis situation. The plan explains that it is NASA’s “policy to report, investigate, and document NASA mishaps” (p. 1). NASA requires that the contingency plan be simulated at least once every 18 months (p. 8).

Throughout the plan, NASA does not use the term crisis, but instead defines “any mishap, mission failure, incident, or high visibility close call that causes or may cause a major impact to space flight operations or prevents accomplishment of a primary mission objective” as a SFO mishap (p. 1). The Agency CAP for SFO defines five categories of mishaps and close calls. A NASA mishap is defined as “an unplanned event that results in injury to non-NASA personnel caused by NASA operations, damage to public or private property (including foreign property) caused by NASA operations, occupational injury or occupational illness to NASA personnel, damage to NASA property caused by NASA operations or mission failure” (p. A-1). The plan then breaks mishaps into five distinct categories (p. A-2). Close calls are not included as a type of mishap.

**Table 1 Definition of Mishaps**

Classes of Unexpected Events	Injury/Death		Investigation/Analysis
	Damage to Property, Facilities or Equipment		
	AND/OR		
Type A Mishap	Equal to or greater than \$1M	Death	Administrator or AA/SMA (AA/OSF if Administrator and AA/SMA decline) appoints mishap investigation board*
Type B Mishap	Equal to or greater than \$250K but less than \$1M	Permanent disability of 1 or more persons, or hospitalization of 3 or more persons.	AA/OSF or Center Director appoints investigation*
Type C Mishap	Equal to or greater than \$25K but less than \$250K	Occupational injury or illness that results in a lost workday case.	Center Director appoints investigator or investigation team depending on significance of mishap*

(Table continued)



(Table 1 Continued)

Incident	Equal to or greater than \$1,000 but less than \$25K	Injury of less than Type C Mishap severity but more than first-aid severity	Same as Type C Mishap
Mission Failure	A mishap of whatever intrinsic severity that prevents the achievement of primary NASA mission objectives as described in the Mission Operations Report or equivalent document.		An investigation board is required and Type A or B Mishap investigation procedures are followed.
Close Call**	No equipment/property damage equal to or greater than \$1,000	No injury and no significant interruption of productive work	Investigated in accordance with its potential

\* If event involves more than one Center or has significant public interest, the AA/OSF, or delegated agent, may recommend that the Administrator activate the International Space Station and Space Shuttle Mishap Interagency Investigation Board.

\*\* Event that possesses high severity potential for any of the previous types of mishaps. (A-2).

When deciding to report a mishap, NASA officials must decide what to report, when to report and who will report the occurrence of the mishap. NASA requires that all mishaps, high-visibility mission failures and high-visibility close calls be reported to the Associate Administrator in the Office of Space Flight (AA/OSF). All mishaps should be verbally reported within 60 minutes of the occurrence. OSF Center Directors, OSF program/project managers or non-OSF management employees who are responsible for OSF programs or projects report to the AA/OSF who in turn notifies the administrator and AA for Safety and Mission Assurance (AA/SMA).

In the event of a mishap “the appropriate organization will ensure that all necessary actions are taken to preserve life and prevent further injury, prevent further loss of resources and securing, safeguarding and impounding evidence” (p. 2). The AA/OSF is the NASA official who declares a mishap/contingency and is responsible for notifying the administrator and AA/SMA. The administrator or other designated official will then activate the plan once notified

of the mishap/contingency. The administrator or other designated official determines “what immediate telephone notification, if any should be made before the Headquarters Contingency Action Team (HCAT) meets” (p. 2). If an SFO Mishap Response Telephone Conference is needed the AA/OSF, Deputy Associate Administrator for International Space Station and Space Shuttle Programs (DAA/ISS and Space Shuttle Programs), AA/SMA, Associate Administrator for Public Affairs, other appropriate staff, responsible center directors and program managers will be notified. The SFO Mishap Response Telephone Conference is initiated within 2.5 hours of the mishap.

Following the SFO Mishap Response Telephone Conference, the HCAT Coordinator, usually the DAA/ISS and Space Shuttle Programs, contacts the other members of HCAT for their own teleconference. During the HCAT Telephone Conference the administrator is responsible, in conjunction with the HCAT, to decide who should be notified outside of NASA, what statements should be made to the media and if any changes should be made to HCAT. The AA/OSF is responsible for reporting the outcome of the SFO Mishap Response Telephone Conference to the HCAT. This includes “the extent and nature of the mishap/contingency, the sequence of events leading to the mishap/contingency and whether an initial determination of a possible cause has been made” and “actions taken or planned, including deployment of NASA personnel and assets, actions involving outside personnel or assets and program actions for mishap/contingency disposition” (p. 3). The administrator and HCAT will then decide whether or not to appoint a mishap investigation board, notify the President, notify key members of Congress or have the Office of External Affairs notify other countries. HCAT will also determine any potential legal problems, if any other agencies need to be involved in the crisis

situation, if anyone else outside the agency needs to be notified of the mishap/contingency and the need for other statements and briefings for the media.

While most of NASA's high-ranking officials and members of HCAT have some communications responsibilities, most fall with the Assistant Administrator of Public Affairs (AA/PAO). During a mishap/contingency situation the Public Affairs Office (PAO) provides support for "the OSF Headquarters Action Center, the on-site investigation, the lead Center investigation team, and the accident investigation board" (p. 6). The AA/PAO is responsible for giving the AA/OSF copies of any video, audio or still photography that may be related to the contingency and advise the AA/OSF and administrator on the proper dissemination of that information. The AA/PAO is also responsible for notifying the White House Press Office and coordinating any NASA TV "coverage/commentary including the continuation/discontinuation of NASA network communications over NASA TV" (p. 6). NASA's first official statement made to the media and the coordination of information that must be sent to other NASA Center newsrooms and through the Internet is the responsibility of the AA/PAO. The Senior Agency Official in Washington (SAO-W) actually makes the public statement. Other responsibilities include managing news queries and coordinating news releases in conjunction with AA/OSF, Deputy AA for ISS & SS Programs, Center Directors and Program Managers. Finally the AA/PAO attends "mishap investigation board meetings, coordinating information to be released and arranging media briefings" (p. 6).

In her book, *Crisis Communications: A Casebook Approach*, Kathleen Fearn-Banks (2007) offers 22 components that should make up a crisis communication plan. Based upon the last publicly released crisis plan, from 2003, NASA meets some, but not all of Fearn-Banks components. Although the list is exhaustive, some components are not necessarily imperative to

an organization's success during a crisis, especially an organization with the history and size of NASA. NASA's Agency CAP for SFO contains Fearn-Banks first three components, a cover page, introduction and acknowledgements. Fearn-Banks recommends that the plan be rehearsed every six months to one year and the plan should include rehearsal dates. The Agency CAP for SFO requires rehearsal once every 18 months and does not list rehearsal dates. For a public agency with a high degree of rotation among appointed, senior staff, NASA may want to practice the crisis plan more frequently and develop a system for monitoring rehearsals. NASA does have the purpose and objectives of the plan, which clearly describe how to identify a mishap or contingency and how the plan responds to that mishap or contingency.

Fearn-Banks suggests that a list of publics should be included in the plan. While NASA does not separate publics out in list form, some publics including the President, Congress, the media, employees and the general public are addressed in the document. The plan details the ways in which the publics will be notified and who is responsible for the notification. One of the Agency CAP for SFO's strengths is how clearly it identifies members of the crisis team. The plan clearly labels the individuals who are on the crisis team, their titles and later goes into great detail about their responsibilities during the crisis. Although a crisis directory does not appear in the 2003 Agency CAP for SFO, contact information is included in the current Agency CAP for SFO according to Bob Jacobs, NASA's current Deputy Assistant Administrator for Public Affairs. "We publish a contingency plan for every flight, although we don't make it public (since it has contact information, numbers, etc.). The fundamentals remain the same, although the contacts do change from time to time. But we do one for every flight" (personal communication, April 28, 2008).

Identifying the media spokesperson is also included in Fearn-Banks components.

NASA's plan identifies the Senior Agency Official in Washington as the person to make any public statements from the agency. The SAO-W can be the Administrator or the Administrator can choose to appoint someone. During Columbia, NASA Administrator Sean O'Keefe served as the SAO-W. Fearn-Banks recommends that even if the head of an organization is "an effective spokesperson, he or she may not be particularly knowledgeable about a technical aspect of the crisis" (p. 302). This was the case for NASA, which allowed several other spokespeople, including engineers and those directly in charge of human space flight to speak about the situation. Recommendations are also made to have a list of emergency personnel and local officials. While NASA does not have that list in its plans, it is difficult to estimate where a NASA disaster may occur. Columbia required the activation of emergency crews from many cities and towns in Texas and Louisiana. A list of emergency personnel in the cities where the field offices are located may help if a crisis strikes one of NASA's 10 branches.

Fearn-Banks suggests, "if particular editors or reporters are important to telling the story to the organization's benefit, a list of their home numbers and emergency numbers will be advantageous" (p. 303). While the Agency CAP for SFO does not list important media contacts, in NASA's case it may not be necessary. "We have a press corps that follows us and we know those people and they know the shuttle program inside and out and they know the orbiter inside and out and a lot of them know it much better than I do, or better than a lot of the communications people do because they grew up with the orbiter, they breathe this specific program, this specific element" (Bob Jacobs, personal communication, April 7, 2008). With a group of reporters designated to cover NASA, the agency does not necessarily need to include media contacts in its plan.

As an agency that employs other organizations to put together complex machinery and

technology, including contact information for the spokespeople of related organization in its crisis plan could be helpful in a crisis situation. This could be especially important if the crisis deals with a mechanical or technological failure that may have something to do with other organizations hired by NASA. While the plan does not designate a particular room as a crisis control center it does recognize the importance for NASA officials to be centrally located. This location is included when officials make contact for the SFO Mishap Response Telephone Conference and the HCAT Telephone Conference. Officials will congregate in a room with the equipment and supplies needed to continue working on the crisis situation.

Fearn-Banks also recommends gathering data and documents that may be needed and placing the documents strategically to guarantee availability during a crisis situation. “The types of documents that can be gathered in advance include safety records and procedures, annual reports, photos, company backgrounders, executive biographies, company maps, branch office locations, quality control procedures, product manufacturing procedures and company fact sheets (including such data as number of employees, products manufactured, and markets served)” (p. 305). This goes hand-in-hand with her suggestion of a Web site that can be continuously updated and include information about the organization and crisis. NASA’s Web site has an abundance of information and was used during Columbia to update the media and the public with pertinent information including URLs and links to other Web sites dealing with space flight or the United States government.

Although not detailed in the crisis plan, NASA used the key message, “find the problem, fix it and fly again” (Bob Jacobs, personal communications April 7, 2008). Fearn-Banks recommends that key messages “be accurate, brief, easy to use in a quote and memorable” (p. 305). Another component that NASA utilized, but was not outlined in its crisis plan is preparing

for trick questions from the media. Paul Pastorek, NASA's General Counsel at the time of Columbia, spoke with employees who were going in front of the media to prepare them for questioning. "I asked some extremely hard questions of these folks before they ever got in front of the glare of the camera and the emotions and the anxiety you know you may say things that you don't mean to say, you may have a really good answer at first, you might think about it twenty-four hours later and have a superb answer and I didn't want all of those anxieties prohibiting those people to answer those questions well so I practiced with them" (personal communication, December 18, 2007).

While NASA's definitions of different types of mishaps and corresponding are another strength of the crisis plan it lacks what Fearn-Banks calls prodromes, or "warning signs" of a crisis (p. 308). However, NASA as an organization has been through many crises, learned from the crises and is better prepared to handle crisis situations than other organizations may be. Fearn-Banks final component for a crisis management plan is an evaluation form. Although not located in NASA's contingency plan, the agency does review and if necessary update the contingency plan following each shuttle mission. Jennifer Wood, Senior Advisor to Public Affairs at the time of Columbia said "There was obviously a review again of the plan after there had been a conclusion in the Columbia Accident Investigation Report, after it came out, and I think there were small tweaks made here and there, but overall I think the plan is very good" (personal communication, April 3, 2008).

The strengths of NASA's Agency CAP for SFO include the agency's ability to remain true to the plan while allowing for flexibility. NASA's current Director of External Affairs at Johnson Space Center Eileen Hawley says "I'm often known for saying 'Don't fall in love with the plan' because I think it can restrict what your capabilities are when you're actually

responding to a crisis” (personal communication, April 21, 2008). The flexibility in the plan allowed NASA to be able to respond to issues in a timelier manner and respond to events that were not accounted for in the plan. Other strengths include NASA’s insistence on regularly practicing the contingency plan and making sure that officials have the plan with them on launch and landing days. “Bill Reedy, who was the head of space operations at the time, pulled his book out...” which included the contingency plan (Paul Pastorek, personal communication, December 18, 2007). One suggestion may be for NASA to separate its communications efforts from the rest of the contingency plan. Separating the communication section of the crisis plan from the rest of its contingency plan could make it easier to identify key publics, and specific strategies and tactics the agency could use during crisis situations. The agency could also consider including in the plan pre-written press releases, news briefs or other tactics that could simply be filled in with pertinent information. During crisis situation, when emotions run high, it may alleviate some of the stress of the situation.

### **Crises and Other Organizations**

Of course NASA is not the only organization in recent years to undergo a major crisis. In his article “Exxon Valdez: How to spend billions and still get a black eye” William J. Small (1991) discusses Exxon’s greatest crisis and eleven lessons that can be learned from its mistakes. After the Exxon Valdez hit a reef off the coast of Alaska on March 24, 1989, Exxon’s handling of the crisis has been used as a case study of what an organization should not do when handling a crisis. Small (1993) recommends candor and repentance when a crisis hits. Exxon was neither candid with information, nor did it immediately offer repentance following the oil leak. The time window following a crisis is also imperative to handling a crisis correctly. An organization needs to divulge as much information as possible as soon as available, something Exxon



executives did not do. Small (1993) also recommends that all organizations have a crisis plan and crisis team put together in advance and organizations should review the plans with some frequency.

Two of Small's (1993) recommendations concern the organization's CEO. He says that the CEO should usually go to the scene of the crisis, unless it can be handled just as well from home base. The CEO should also be the spokesman during the crisis, unless unable to fulfill that role. CEO's should be trained to handle speaking to the media. Small also recommends that the plan should include someone who can monitor all media coverage of the crisis so the organizations is aware of what the media is reporting.

Communication was a major problem Exxon faced in its handling of the Valdez oil spill. Information traveling both within the company and outside the company suffered from a lack of a communication structure, particularly information that needed to travel quickly to top management. Exxon was also unwilling to use creative ideas, such as bringing environmentalists to the scene of the spill. Small recommends making friends with groups that can help during a crisis situation, including the press, important publics, politicians and even interest groups. Finally Small reminds organization leaders to use caution when advertising following a disaster. Advertisements should be used to "offset impressions that they find objectionable or simply to buttress their support" (p. 24).

In May of 1996 ValuJet faced its own crisis and tragedy when flight 592 crashed into the Florida Everglades, killing all 110 of the people onboard (Englehardt, Sallot & Springston, 2004). Fortunately, ValuJet had a crisis plan in place and activated it once the plane crashed. The plan included immediately alerting the National Transportation Safety Board, sent officials to the accident site within hours and assigned a separate representative to directly communicate

with family members of the deceased. ValuJet used both mortification and ingratiation in its corporate messages following the crash. ValuJet also shifted blame to its maintenance company, SabreTech, for its mislabeling of oxygen canisters which proved responsible for the crash. ValuJet also failed to ever apologize for the crash, which Benoit (1997) says is one of the best strategies an organization can use following a crisis. NASA's crisis strategies have been both successful and unsuccessful over the course of its history. As discussed earlier, NASA's best crisis effort followed the Columbia shuttle disaster.

### **Research Questions**

The remainder of this study focuses on NASA and the crisis communication strategies it used following the Columbia tragedy. The study will seek to answer the following research questions:

**RQ 1:** From an internal perspective, did NASA officials follow the detailed crisis plan that was laid out before the disaster or did the plan change as the disaster happened?

**RQ 2:** From an internal perspective, which specific crisis communication strategies and tactics did NASA use following the disaster?

**RQ 3:** To what extent did NASA's role as a public sector organization have an impact on its crisis communication strategies and overall response to the crisis?

**RQ 4:** Does NASA's Agency Contingency Action Plan for Space Flight Operations follow Garnett's (1992) strategic contingency model for government agencies?

**RQ 5:** Can NASA's crisis plan serve as a model for other public sector organizations?

## **CHAPTER 3: METHOD**

To gain the best insight into NASA's involvement with the Columbia space shuttle disaster from an internal perspective, the researcher based the study on Yin's (2003) model and used qualitative research methods. In-depth interviews were essential in gaining the proper insights into NASA's crisis communication strategies and tactics.

### **Case Study Approach**

Using Yin's (2003) definition that a case study, "investigates a contemporary phenomenon in a real life context and multiple sources are used" (p. 33) this study uses a series of interviews with key NASA officials, employees and a journalist to gain a deeper understanding of the factors that influenced and contributed to the public sector organization's response to the Columbia space shuttle disaster. Case study methodology is often used "to contribute to our knowledge of individual, group, organizational, social, political and related phenomena" (1). This study uses interviews with individual members of NASA in order to better understand the organization as a whole. To better understand the "global nature of an organization or of a program, a holistic design" is used. In this case, a holistic single case studied is used (43).

This case study focuses on the events leading up to the disaster, including the implementation of a detailed crisis plan, the events of that day and the focus on both internal and external audiences following the explosion. Using interviews helps gain a first-person perspective on the event, how public sector organizations must respond to crises and help to glean lessons learned that can be applied to later crises and other public sector organizations. Case studies seek to answer "how" and "why" questions (Yin, 2003). To understand the answers

to the questions above the researcher determined that case study methodology would yield the best answers.

### **Data Collection**

Following Grunig and Hunt's recommendations (1984) the researcher spoke with members of NASA's dominant coalition, or key decision makers during Columbia. The researcher followed McCracken's (1988) long interview method and interviewed key NASA officials, NASA employees and journalists via phone, email and in-person. Interviews ran between 20 minutes and an hour and 13 minutes. According to McCracken (1988) interviews "can take us into the mental world of the individual, to glimpse the categories and logic by which he or she sees the world" (p. 9). The interview method allows the individuals to "tell the story in their own terms" (McCracken, 1988, p. 41). All interviews were initially either by telephone or in-person. Follow-up questions were asked via email. Interviews were obtained through a snowball effect, with interviewees suggesting others within the organization.

Two separate questionnaires were written, one for NASA employees and one for journalists who covered Columbia's events. Both sets of questionnaires helped answer research questions, including specifics about the crisis plan, specific strategies and tactics and how NASA as a public sector organization must respond to a crisis. After the eight interviews clear patterns developed making only a few follow-up questions necessary.

### **Subjects**

The study consisted of seven personal interviews with NASA officials, other NASA employees and a journalist. Personal interviews were done with Sean O'Keefe, former NASA administrator; Paul Pastorek, former general counsel; Glenn Mahone, former NASA chief of strategic communications, assistant administrator for public affairs and press secretary; Jennifer

Wood, former senior advisor to the head of Public Affairs; Bob Jacobs, former NASA news and multimedia director and current NASA deputy assistant administrator for public affairs; Eileen Hawley, former news chief at Johnson Space Center and current director of external relations at Johnson Space Center; and Michael Cabbage, former Orlando Sentinel reporter and current member of the public affairs senior management team. While the researcher conducted all interviews, five were via phone and two were done in-person (Table 2).

## **Table 2 Interviews**

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### **In-Person Interviews, Date of Interview, Length of Interview**

Sean O’Keefe, April 18, 2007, 43 mins.

Bob Jacobs, April 7, 2008, 1 hr. 13 mins.

### **Phone Interviews, Date of Interview, Length of Interview**

Paul Pastorek, December 18, 2007, 34 mins.

Glenn Mahone, March 27, 2008, 20 mins.

Jennifer Wood, April 3, 2008, 25 mins.

Eileen Hawley, April 21, 2008, 20 mins.

Michael Cabbage, April 28, 2008, 29 mins.

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Following each interview, the researcher transcribed the interviews and searched for themes that provided answers to research questions. The interviews were recorded to ensure accurate transcription. After reading each interview individually, the researcher grouped respondent answers into categories corresponding to research questions, additional common themes or interesting findings.

## CHAPTER 4: RESULTS

As with all qualitative case studies, the results of the in-depth interviews cannot be generalized to all public sector organizations. However, lessons can be learned from the ways in which NASA handled the Columbia disaster and those lessons can be applied to other public sector organizations. Six common themes emerged from the interviews. NASA officials revealed that they did not stray from the plan and that it served as a well-planned outline for the situation. Each also commented that although the plan laid out individual responsibilities, it also allowed for flexibility. Comments were also made concerning NASA as a public sector organization, its responsibilities as a public sector organization and how public and private sector organizations differ in how they report crisis situations. Interviewees spoke in detail about the tactics used during the crisis situation. The relationship between NASA and the media emerged as a common theme in the interviews. Finally the most common theme involved NASA's open and honest communication efforts the day of Columbia and the weeks and months that followed.

### **Sticking to the Plan**

As an agency that faltered after the Challenger explosion, NASA and its officials understood the need for a plan. Eileen Hawley emphasized giving the plan some thought ahead of time, which allows personnel to think about how they're going to manage the situation, who their potential audiences are that they need to reach and how the organization is going to do that. Bob Jacobs agreed calling crisis plans an "integral" part of any crisis. Jacobs said, "You have to have a plan; you can't go into it blind. It's very important that you sit back and you plan ahead for any eventuality."

**Jennifer Wood:** "The fact is, it doesn't matter how safe one's workplace may be...no one should be without a crisis communications plan because we live in a world and a day

and age that warrants it. I mean there really is no excuse for not having one in my opinion.”

Repeated throughout the interviews was how closely the Agency CAP for SFO was followed. All NASA officials responded that they deviated very little from the plan and that they thought the Agency CAP for SFO was well thought out and covered many areas of the crisis that required attention. Jennifer Wood recalled deviating very little from the plan, adding that though there were adjustments none were so major that she even remembers them specifically. She did mention, however that tweaks were made following the release of the Columbia Accident Investigation Board’s report of the accident.

NASA officials and employees also recognized the importance of practicing the plan to ensure that if they had a crisis situation occur that they would be prepared. Officials at both headquarters and field centers spoke about the importance of practicing the contingency plan. According to Eileen Hawley the importance of practicing came down to timing. She said they did not have to spend time figuring out what they were supposed to be doing or who should be planning the press conference. Hawley added, “The trick in having a plan is if it just sits on your shelf it isn’t going to help anybody. It has to be a living, breathing document.” Glenn Mahone said the organization updated the plan constantly; the organization role-played and practiced the plan and organization leaders made sure their staff had copies of the plan. He said, “...that’s the most important thing, you know you have to have it out there to the people who would play a role in it so that they wouldn’t make mistakes.”

**Bob Jacobs:** “It is something that we practice annually, we go through different scenarios and there is one for every mission and it really helped because we literally followed it page by page there in the first hours.”

**Sean O’Keefe:** “...to actually go through and exercise the plan, in a simulation type environment helps. Part of the plan is an investigative body. Simulations help to make sure that everybody on that list knows that they are a part of that body and know what to do. The value of exercising it was demonstrated to me more vividly than I ever would have dreamed.”

### **Clear Responsibilities**

Each member of NASA clearly understood his or her role in the communications efforts following Columbia. Practicing the plan made it easy for them to understand where they fit into the plan and the duties that the plan outlined for them. Each NASA employee was able to clearly articulate his or her role during the crisis situation. NASA Administrator Sean O’Keefe said his duties under the plan included notifying President Bush and the Chief of Staff.

**Glenn Mahone:** “I was the person who had the responsibility for, of course, determining how, when and if we talked with the media, press conferences and all of those. It was my decision based on how and when we would have information and when we would be prepared to put that information out to the general public and what statements would be made. I played a role and a major role in writing the statements and moderating the press conferences and so forth, determining how long they would go, what questions we would take and what questions we would answer and at what time.”

Employees who were not part of the crisis team still utilized the plan by finding other employees who needed help, working on documents and making themselves available to do needed tasks. Jennifer Wood said that after making sure her duties with the administrator were taken care of, she went to the main press office building to see how she could help employees there. She remembered working on the first draft of the press release, which said that NASA’s



first priority was search and rescue.

Others remember the moments immediately following the disaster. NASA employees immediately looked to the crisis plan to serve as a guideline for their next step. Sean O’Keefe explained that when an event as tragic as the Columbia disaster happens and there is a lot of emotion and sadness surrounding the event, the crisis plan helps employees focus on what needs to be done.

**Paul Pastorek:** “He [Bill Reedy, associate administrator for space operations] pulled out his book that he had with him, a three ring binder that had the plan and we began immediately following the contingency plan. The first thing to do was get the families off the stands and out of view from the media and second thing to do was to call the President and then were a whole series of phone calls that had to be made. Then we went through a whole series of issues, dealing with media, writing comments for the media, our media person, our head media person was not in Florida so I ended up writing comments for Sean, we did a teleconference right after one o’clock. We had the President speak to the families over a cell phone feed and a bunch of stuff like that.”

While the plan provided clear descriptions of the responsibilities of essential personnel, employees recognized the need for flexibility in the plan. Flexibility allowed employees to respond to events not covered in the plan, or respond to covered events in different ways. Bob Jacobs said that its important not to make the plan so detailed that you are limited as to what your response can be. Jacobs said plans must be flexible enough to allow for the “unknown unknowns.”

**Eileen Hawley:** “I’m often known for saying, ‘Don’t fall in love with the plan’ because I think it can restrict what your capabilities are when you’re actually responding to a crisis”

Officials made it clear that while the plan spells out the responsibilities of each member of the HCAT, not all members may be present at the time of the crisis. They recommend the plan be flexible enough to let others deal with the situation if needed. Bob Jacobs said that while there were things the organization needed to do that were not covered in the contingency plan, because the plan clearly spelled out what needed to be done it was easy to add on additional responsibilities. He said, “I think what would help other crisis communication planners is just focus on what needs to get done and let the people who are there at the time focus on how to accomplish it.”

### **NASA as a Public Sector Organization**

As a government agency, NASA is a public sector organization that is required to keep Congress and the public informed of its actions because it uses federal funds. Interviewees described the difference in the ways public and private sector organizations must communicate during crisis situations. Jennifer Wood said that because NASA uses taxpayer dollars, taxpayers deserve to know what is going on with the agency. Other interviewees explained the difference between private and public sector organizations responses to crisis situations. Eileen Hawley said that although it may be easier for small companies not to talk to elected officials or the public it may not be a smart decision for the organization. She also said that as a government agency, NASA does not have that choice. Glenn Mahone agreed and said that private organizations can give the public whatever they want, but government organizations have to deal with things like the Freedom of Information Act. He said that the public has a right to know what is going on within government agencies because they are paying for government programs.

**Bob Jacobs:** “Private industry is just a little different because they report to different [publics], it depends on the job...the leadership may feel they report to shareholders or

their own employees before they need to report to the general public and one of the first things that any corporate organization needs to identify is who are its stakeholders, who are the various people they need to communicate with when something goes wrong or even when something goes right.”

### **Tactics Utilized During Columbia**

Common throughout the interviews was the detailing of specific tactics used following Columbia. Most tactics were outlined in the Agency CAP for SFO, but as stated earlier, flexibility with the plan caused tactics to be added depending on the situation. The Agency CAP for SFO (2003) mentions the following tactics: public statements, appropriate releases of video, audio, or still photographs, notification of the President, coverage and commentary of the event on NASA TV, the naming of the headquarters spokesperson and press releases. Press releases are as detailed as possible and identify how NASA will investigate the mishap. Michael Cabbage remembered a press opportunity with NASA Administrator Sean O’Keefe two hours after the accident. He remembered O’Keefe making a brief statement then not long after remembers Shuttle Program Manager Ron Dittmore’s press conference from the Jonson Space Center. O’Keefe recalled using NASA TV as an in-house capability that allowed him to broadcast internally when necessary. Using NASA TV he held agency wide town hall meetings to talk about the disaster, the developments, how it happened, what was going on and what the agency was doing to fix the situation.

Bob Jacobs, former NASA news and multimedia director and current NASA deputy assistant administrator for public affairs remembers setting up a “war room” at NASA headquarters that was used as a central point for the agency and had connections with all the space operation centers. He also spoke about the importance of the Web page. He explained

that as factual information came out the agency updated the Web site with the newest information. He also worked on the initial remarks for the administrator. The administrator, immediately following the President, gave a press conference at the Kennedy Space Center explaining what the agency knew about the accident.

Jacobs also mentioned interviews with reporters, or live shots, during news programs and press briefings were key tactics. NASA tried to do two press briefings daily, one in the morning and one later in the day. The time of the press briefings remained constant to ensure that reporters knew when NASA officials would release information and allow questions. Morning press briefings took place at NASA Headquarters in Washington, D.C. Afternoon press briefings were at the Johnson Space Center in Houston, T.X. and consisted of more technical information. Michael Cabbage remembered the daily press conferences, the constant information releases and the large staff of public affairs officers who were available to help answer media questions.

**Bob Jacobs:** “We were doing multiple teleconferences each day with all the public affairs officers...organizing whatever the latest fact sheets were and making broad distributions, making sure everyone had the latest information and had the same information. We kind of divided the work, the field centers dealt with their regional media...headquarters dealt with the majority of the network and the larger media.”

NASA’s Web site was instrumental in handling the crisis response. It was updated just the night before the shuttle explosion and NASA used it to inform the public and the media about the events surrounding the disaster. Countless documents were placed on the Web site, even documents that journalists had not asked for. The importance of the Web site will be discussed later in this study, when discussing NASA’s open and honest communication practices.

Reaching its employees proved important in NASA's successful handling of the situation. To reach those employees NASA used email and emergency phone lines. Eileen Hawley said that she used standard inter-office email to reach her employees. She also used two different emergency lines that employees can call anytime there is an emergency to help answer questions about the accident. NASA officials understood the importance of its employees in surviving a disaster like Columbia. Bob Jacobs said that it is important to remember employees during a disaster because they are the ones that will help pull the organization through the crisis and it is important to make them feel part of the plan.

Since Columbia, NASA has utilized several tactics to make internal communications, both within headquarters, within field center and within the agency as a whole easier. A survey was first used to determine the different ways in which the agency was currently trying to communicate and what was and was not effective. Newsletters were used to facilitate the flow of information at headquarters and field centers, but there was no document for the agency as a whole.

**Jennifer Wood:** "We wanted to make it more an overall agency document so it would serve dual roles. Not only would it be an exciting document for all our employees to see the great work that was happening throughout the agency instead of just at headquarters."

Wood said the newsletter was also sent to members of Congress to keep them aware of "what the NASA funding was going toward, the great science, the great research and how it really was beneficial to continue to invest in this amazing agency."

### **NASA's Relationship with the Media**

One of NASA's most important publics during the Columbia shuttle disaster was the media. In the age of immediate information, provided by the Internet and 24-hour cable news

channels, the media lost no time in discovering the Columbia disaster. NASA immediately responded, giving the media as much information as possible all the while refusing to speculate on the cause of the media. In the interviews, NASA officials discuss their relationship with media partners the day of Columbia and in the weeks and months that followed. The interactions were overwhelmingly positive.

**Glenn Mahone:** “I think that we probably had the best operation going and some of the best media partners we could have asked for.”

Eileen Hawley said that many reporters covering the story were part of the NASA press corps, a group of reporters regularly assigned to cover NASA who had previous media relationships with many of NASA’s public affairs officers. Michael Cabbage, a member of that press corps, said that there were members of the press who regularly interacted with certain NASA personnel on a regular basis and that during crisis situations familiarity helps because you know who you are dealing with and what the expectations are from both the agency and reporters.

**Bob Jacobs:** “We have a core press, a press corps that follows us and we know those people and they know the shuttle program inside and out and they know the orbiter inside and out and a lot of them know it much better than I do, or better than a lot of the communications people do because they grew up with the orbiter, they breathe this specific program, this specific element.”

Although NASA has a press corps that regularly covers it, following Columbia, many reporters were sent to cover the event from around the country and around the world who had not previously reported on NASA. With so many reporters unfamiliar with NASA, space operations

and the shuttle program, officials found themselves leading “Shuttle 101” lessons to properly inform the journalists writing about NASA for the first time.

**Bob Jacobs:** “...when you have an accident the scope of Columbia, you have all the reporters thrown at it and for the first couple of weeks you’re literally having to give pointy end goes up lessons to reporters who are trying to figure out how to disseminate this information to their audience. And there were hundreds upon hundreds of them who didn’t know anything about the shuttle program.”

**Eileen Hawley:** “...the bulk of them [journalists] of course were media who had never covered the space program in their lives. So we found ourselves in the midst of trying to explain what happened to Columbia, dealing with people who barely knew the pointy end was up, so we found ourselves doing what we would call Shuttle 101, trying to explain highly complex things to reporter who had never even considered it before.”

Although the relationship between NASA and the media was good, the grace period eventually ended and reporters wanted answers. Some tensions arose between NASA and the media. Most tensions were between NASA officials and reporters who were not part of the NASA press corps.

**Bob Jacobs:** “...there is a compassionate period, goodwill, grace period of about four or five days when you’re not getting the unanswerable questions, the how could NASA allow this tragedy to happen type stuff. Everyone is so focused within those first few days with first just understanding the tragedy and getting their hands around what’s going on. But after that initial wave of information goes and gets out there, then it starts to become a little more pointed, a little more critical, a little more news, the reporters actually just get smarter...”

Eileen Hawley recalled that the change in how reporters covered the agency came after the memorial service. She said that following the memorial service the general reporters left and investigative reporters took over. Hawley said that the investigative reporters were more aggressive than the general reporters.

Former *Orlando Sentinel* reporter Michael Cabbage also remembered some tensions between NASA and some of the journalists covering the story. He confirmed that tensions often originated with reporters who had not previously covered NASA. Cabbage said reporters from outside the world of NASA sometimes became frustrated with NASA press corps reporters.

**Michael Cabbage:** “Most of the people...where there were tensions were people who sort of parachuted in, who covered other beats and general assignment reporters from other newspapers that didn’t usually cover the shuttle program who would drop in and be frustrated by [corps reporter’s] ability to break stories and get inside information.”

Although at points following the Columbia disaster situations may have gotten tense between NASA and the media, NASA officials believe that the media efforts went well because journalists realized NASA was doing its best during a very difficult time. Jennifer Wood said that although there were moments of frustration, reporters realized that “...at the end of every day we were doing our best to get them the information and because of that I think they respected us as a team, respected our plan and kept a good relationship with the agency after.”

When it came to recovering remains and parts of the shuttle, the media in Texas and Louisiana were valuable assets for NASA. Parts of the shuttle that fell to Earth after the explosion were dangerous to humans and the media were crucial in getting that information out to citizens in the debris field area.



**Eileen Hawley:** "...the media were remarkably helpful, especially the media in and around East Texas and Louisiana because we had a huge debris field when the shuttle broke up. So they were very helpful in information their public what to do if you find something."

### **Open and Honest Communication**

"...tell the truth, tell it all and tell it now. And that was our mantra, we were going to be as transparent as we possibly could be" said Paul Pastorek of NASA's communication efforts following Columbia. The idea of open and honest communication, or transparency, was the most common theme echoed throughout the interviews. From the beginning NASA took the position of being as open and honest with its information as possible, although as Bob Jacobs put it, it's hard to hide information when NASA puts it "triumphs" and "tragedies live on television for everyone to see." The idea of transparent communication came directly from NASA leadership.

**Bob Jacobs:** "One thing that helped us tremendously was that the administrator, Sean O'Keefe at the time, made a flat out determination that anything up until the accident, anything factual that we could release up until the accident would be released immediately, without a lot of editing...in terms of government and corporate management [it] was a very bold position to take...but open and transparent communication is important. Sean got it and exercised it and that's why the agency, at least in terms of a communications response standpoint, fared as well as it did publicly. We're probably one of the few government agencies who has openness and transparency written into its founding act..."

As discussed earlier, in order to maintain transparency, NASA released information in a variety of ways to ensure that all questions could be answered correctly and in a timely fashion. Some at NASA even admit that the agency may have released more information than necessary immediately following the disaster, however they also agree that the agency benefited from the wide release of information.

**Eileen Hawley:** "...when we got FOIA requests if...something was releasable, even if we didn't get a request for it, we put it out on our Web site so people could find it. And I think that helped. Some of it is stuff that probably today if a reporter asked for the same thing we wouldn't release it, but give the unique circumstances, we felt like this is a legitimate thing that we should release."

The idea of an open and honest agency led to a development of trust between NASA and the media. Glenn Mahone said that NASA was an open organization that built strong camaraderie's with the media. He said that the media knew they could trust that NASA would not keep pertinent information from them and that open communication led to good relationships. NASA, in the opinion of one interviewee, surpasses other federal organizations in their communication efforts.

**Michael Cabbage:** "NASA, when compared to other government agencies, I always thought was pretty darn good. They were relatively open and in fact one of the better government agencies about responding to media inquiries...about making officials accessible for interviews..."

Some at NASA believe that unlike, private sector organizations, public sector organizations like NASA are held to different standards of transparency. While private organizations can choose what information to release, there are rules surrounding what

information public organizations must release to the public. Jennifer Wood said that no matter the type of organization, all businesses should conduct themselves in the most forthright and truthful manner as possible. She did admit, however, that federal agencies are held to special standards, but agreed with those special standards. She felt that as a taxpayer herself she expected NASA to be open, honest and forthright with its information.

While disclosure of information was paramount to NASA's efforts following Columbia, the agency was careful about speculation on the cause of the accident. Paul Pastorek emphasized that under no circumstances did the agency allow anyone to speculate on the cause of the accident. Unfortunately for NASA, some spokespeople began to speculate. However the agency quickly responded by issuing statements making it clear that the cause had not been determined.

**Bob Jacobs:** "...you have to be careful when you're being that open and that transparent, not to start crossing into lines where people are getting you to speculate about what may or may not have happened..."

As a public sector organization, NASA was inundated with Freedom of Information Act (FOIA) requests. In order to alleviate the need for FOIAs, NASA released as much information as it could, as quickly as it could. Bob Jacobs said that since the FOIA process itself takes time, the agency did not wait for FOIA requests, but tried to supersede the requests by providing information before the agency was asked. Paul Pastorek said that when it came to public records the organization took the position that it was not going to exercise its right as an agency to withhold any documents, except those containing personal information. This included releasing large amounts of data and email traffic.

Providing information via the Internet proved to be NASA's best way to get large amounts of information to the public in a timely fashion. The agency decided to put as much

information on the Internet as possible, even if the information had not yet been asked for. This pre-emptive strike helped the agency handle the large volume of media inquiries and FOIA requests it was receiving at the time.

**Paul Pastorek:** "...anything that was produced was put on the Web, not only did we provide documents pursuant to FOIA requests but we posted everything to the Web. The transparency was pretty high. Our position was if anybody asked for it and even if they didn't ask for it we were going to put it up there."

While similar themes emerged throughout the interviews, each person interviewed was able to give their unique perceptions and insights into the events surrounding the Columbia shuttle disaster.

## CHAPTER 5: DISCUSSION

Throughout its history NASA has struggled with its crisis communication efforts following mission disasters. The organization is no stranger to being in tough situations following crises and has handled some well and faltered after others. NASA's poorest crisis effort followed the 1986 Challenger explosion. However, NASA was able to learn from the mistakes it made following Challenger and was careful not to repeat them when they were forced to respond to Columbia in 2003. Weick (1995) said that what is important is not the actual crisis, but how an organization deals with the crisis. Under the leadership of Sean O'Keefe, the agency made sure that it had a crisis plan, that the crisis plan was practiced often and that everyone within the agency knew what the plan entailed.

**RQ 1:** From an internal perspective, did NASA officials follow the detailed crisis plan that was laid out before the disaster or did the plan change as the disaster happened?

NASA officials reported few deviations from what was laid out in the Agency Contingency Action Plan for Space Flight Operations. Although communications efforts are not separated from other duties in the contingency plan, NASA members said they clearly understood the roles laid out for each of them in the plan. Employees who were not included by name in the plan still understood what their responsibilities were and acted accordingly. One reason the interviewees gave for the smooth efforts following Columbia was the fact that the plan was rehearsed often. A crisis plan will work only if the members of the organization are familiar with it. The easiest way to familiarize members of the organization with the plan is to have them practice crisis scenarios.

Although the plan helped members of NASA immediately following the crisis, the organization recognized the need for flexibility. Following a crisis, things may not go the way

they are anticipated to go and incorporating a certain amount of flexibility into the plan will help the organization when new problems arise. Finally, NASA officials agreed that while the Agency CAP for SFO covered many areas of the crisis situation, there were still duties that had to be added in as they followed the plan. Organizations should remember that it would be impossible to foresee every need that will arise following a crisis.

**RQ 2:** From an internal perspective, which specific crisis communication strategies and tactics were used following the disaster?

NASA utilized several strategies and tactics in order to reach its publics following the Columbia disaster. According Coombs and Holladay's (1996) three options or strategies that an organization in crisis could utilize, NASA used the third strategy. The organization chose to alter the perception stakeholders have of the crisis and work to protect and repair the organization's reputation. NASA also followed Kauffman's (2000) three rules of crisis communication: respond quickly, tell the truth and provide a constant flow of information, especially to key publics.

NASA used a variety of methods including news briefs, press conferences, interviews with officials, press releases and wide releases of information via its Web site. NASA was also keenly aware that it had to reach its publics using different tactics. To reach its employees NASA used its internal email system and hotlines to explain the severity of the situation and the proper procedures for employees. In order to reach the public, NASA heavily relied on the media to disseminate valuable information, especially to residents of East Texas and Louisiana. It was crucial for NASA to reach the residents in order to keep them safe from parts of the shuttle that survived re-entry.

Reaching the media was crucial to NASA's success following the disaster. The relationship between NASA and the media that covered the situation was mutually beneficial for both sides. NASA helped the media tell the story to the public by providing them with information through press conferences designed to provide insight into both the technical aspects of the crisis and the overall efforts of the agency. NASA also made sure it provided public affairs officials to answer questions. NASA used its Web site to provide large amounts of information to both the media and the public including press releases, contact information, email records and other agency documents.

Agencies following NASA's example should recognize the need to use varying tactics when reaching their different publics. According to Garnett's (1992) strategic contingency model agencies need to remember who they are trying to reach with their messages and that will have an influence on the message and the medium used to send that message.

**RQ 3:** To what extent did NASA's role as a public sector organization have an impact on its crisis communication strategies and overall response to the crisis?

The difference between public and private sector organizations really comes down to two points. Public sector organizations are held to the highest levels of authority: Congress, the President and the American public. Private sector organizations tend to consider themselves responsible to their shareholders first and others second.

NASA recognized the need to be forthright with its publics and built plans for transparent communication directly into its contingency plan. The President, Congress and the public were immediately notified of the contingency situation and the agency fared better in the long run for disclosing the amount of information that it did. Other government agencies could take note of NASA's efforts and adopt transparent communications into their contingency plans.

**RQ 4:** Does NASA's Agency Contingency Action Plan for Space Flight Operations follow Garnett's (1992) strategic contingency model for government agencies?

Though no mention was made of following a particular model when creating the Agency CAP for SFO, NASA's contingency plan fits into Garnett's (1992) strategic contingency model for government agencies. NASA's goal concerning crisis communication in the contingency plan was to inform its publics, influence their attitudes and affect their behavior surrounding the Columbia disaster, meeting Garnett's first objective. The second objective, audience, includes factors surrounding what an organization needs to know about its audience including position, background, role, interests, knowledge, needs and impact. NASA knew its audiences and how to reach them in the most efficient manner possible. The third objective, the management situation includes information surrounding the organizational climate. The agency makes it clear in the beginning of the contingency plan the structure of the organization and the subsequent responsibilities of the HCAT members. Garnett's final objective requires organizational crisis planner to think about the selection of the medium and the crafting of the message. Messages that are sent through the wrong medium or are poorly crafted may never reach their target audience, ultimately causing greater problems for the organization in crisis.

The lack of information on public sector crisis communication strategies makes it difficult to find a model that NASA's plan fits into perfectly. The more research that can be done in this area of crisis communication will help build new models that can help other public sector organizations plan for crisis situations.

**RQ 5:** Can NASA's crisis plan serve as a model for other public sector organizations?

NASA officials believe that their contingency plan could serve as a model for other organizations. The contingency plan does clearly defines the responsibilities of NASA officials



and details the agency's communications efforts. With the lack of research concerning communications efforts with private sector organizations, NASA's Agency CAP for SFO could be used as a model for other agencies.

## **Limitations**

The main limitation faced by this study was the inability to interview sources from outside the agency. Although those from NASA provided insight into the organization's crisis efforts at the time of Columbia, it is hard to assess NASA's efforts without speaking with the publics the organization was trying to reach at the time. The one "outsider" interviewed, Michael Cabbage who at the time was with the *Orlando Sentinel*, now works at NASA Headquarters. In addition, only one person interviewed, Eileen Hawley, worked at a NASA site other than headquarters.

Future studies may want to interview more members of NASA, including those from every field site and those who do not rank at the top of the chain of command. Additional interviews may also be done with reporters who covered the event. Due to time restraints the researcher was unable to speak with crisis communication experts, but future researchers should consider the insight those professionals could give on the subject. Crisis communication experts may be able to offer their opinions on what NASA did well, what it could have improved on and how they would have handled the situation if it had been up to them.

Another limitation included the inability to cover the breadth of information gathered during the interview process. Many studies could be written from the information provided by NASA personnel. Future researchers may focus on NASA's drive to improve its internal communications or its concern for the families of the shuttle crew.

## **Implications**

Public sector organizations have an impact on how Americans live their day-to-day lives. Much of their time is taken up by these agencies, whether it is filing taxes with the IRS or waiting in line at the Department of Motor Vehicles. These agencies are responsible to the highest levels of authority in the country, Congress, the President and most importantly the American public. As taxpayers who are footing the bill for government programs, citizens have the right to know what is going on within the walls of these agencies.

As one of these agencies, NASA receives its funding, made up of taxpayer dollars, from Congress. What sets NASA apart from other federal agencies is its willingness to be as open and honest with the public as possible. NASA demonstrated this during the Columbia accident, but tries to remain as transparent in its communication as possible at all times. Even when not in a crisis situation, NASA disseminates as much information as it is allowed through various media channels, especially its Web site.

Studies like this one can shed light on public sector organizations and help them understand the importance of transparent communication with their constituents. Doing studies similar to this with other agencies could provide valuable insight into the type of information is regularly released by federal agencies. In addition, the way NASA handled the Columbia accident could be used as a model for other public sector organizations. Its policy of transparent communication is, in the opinion of the researcher, why the agency fared as well as it did with both the media and the American public following the disaster. More importantly NASA's plan could be used as a guide for all organizations, not just public sector organizations. Whether an organization is public or private, in the long run it will fare better by telling the truth as quickly as possible, accepting blame if the crisis is its fault and releasing as much information as possible

in a timely fashion. Every organization will face a crisis at some point in its history, but organizational leaders should recognize that a crisis situational does not necessarily signal the end of that organization. NASA has proved that it is possible to bounce back from a crisis stronger than ever.

## **CHAPTER 6: CONCLUSION**

While evaluating NASA's communication efforts following Columbia, it became clear to the researcher that there are many lessons to be learned. Speaking with individuals who lived through a major crisis scenario and who handled it in such a way that it could be used as a model for other organizations proved that organizations without a crisis plan really have no excuse. Following a crisis, emotions can often run high. NASA employees were not only dealing with the loss of a shuttle, but with the loss of seven colleagues. When faced with that kind of tragedy a carefully laid out plan can help crisis team members move past the emotion and get to work on what needs to be done for their organization.

While making as detailed a plan as possible certainly helps when a crisis erupts, it is equally important to allow for flexibility in the plan. While detailing what needs to be done following a crisis, assigning only one person to handle certain responsibilities may backfire on the organization. Not all members of a crisis team are available all the time. It is often more important to stress what needs to get done, rather than who is responsible for doing it. Following Columbia, NASA employees who were not members of the HCAT were able to fill in to important roles not outlined for them in the crisis plan. Organizations putting together crisis plans should also remember that not every communication tactic will reach all necessary publics or work in certain situations. NASA found that its Web site was one of its biggest assets following Columbia. It allowed the agency to easily disseminate documents and allowed reporters clear access to important information.

As discussed earlier, public sector organizations are held to different standards than private organizations when it comes to crisis response. However, public organizations could take note of the way NASA handled its communications following Columbia. Although required

by FOIA to release information, NASA used the situation to act, not react. Instead of waiting for the requests to process the organization went ahead and released as much information as possible, hiding nothing from the media and the American public. If all organizations were up front and honest in their communications efforts it would help them gain credibility with their publics and in most cases help resolve the crisis situation faster. This leads to perhaps the most important issue discussed in the interviews: transparent communication.

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## **APPENDIX A: INTERVIEW QUESTIONS**

### **NASA Officials and Employee—Interview Guide**

Before beginning interview ask if they can be recorded for accuracy.

1. Name, position at NASA.
2. What brought you to NASA? Why did you begin working there?
3. What day-to-day duties did/does your job entail?
4. Explain your involvement the day the Columbia shuttle disaster happened?
  - a. How did you find out?
  - b. What was your initial reaction?
5. Were you aware of the crisis communication plan before the shuttle disaster?
6. How did you fit into the crisis communication plan?
7. Was the crisis communication plan followed as written or were there changes?
8. Explain your involvement with the media on the days and weeks following the explosion.
9. There was no plan in place at the time of Challenger, do you think having a plan in place helped in the aftermath of Columbia?
10. As a public sector organization, does/did NASA face challenges that a private sector organization does not?
11. How did the internal communications work at NASA? How did you reach the 10 NASA locations?
12. Is there anything you would have done differently?
13. Is the organizational culture of NASA conducive to internal communication? Did that help in dealing with the Columbia crisis?

14. Do you think other organizations would benefit from having a crisis communication plan? Why/why not?

Other questions will be asked during the interview to gain complete answers to questions, to gain further understanding of concepts and to get more detail on interesting subject matter.

### **Media—Interview Guide for Michael Cabbage**

1. Explain your background as a journalist. Were you always assigned to space/science stories? How did that become your beat? When did you first begin writing about NASA?
2. Explain your involvement with NASA prior to Columbia. Had NASA been open with information before the disaster? Who was your main contact within the agency?
3. If you had been to other landings, how did those work? Were the procedures the same on the day of Columbia?
4. Explain the day of Columbia. When did you realize that something had gone wrong? What happened next?
5. Was it obvious that there was some kind of crisis communication plan in place from the viewpoint of the media? Did NASA seem prepared or unprepared?
6. What was the relationship like between the media and NASA? Was it a good relationship, a tense relationship?
7. What about the relationship in the days and weeks following Columbia?
8. What made you decide to join NASA?

## APPENDIX B: INTERVIEWS

Interview with Sean O’Keefe  
(In-person interview, April 18, 2007)

On your first day at NASA you asked managers to bring to you their plans for responding to an accident. Why was that your first priority? Why was it important to update and rehearse the plan? Was it important to learn from the communication failures that occurred after Challenger?

The question I asked them was what do you do if you have another Challenger. It tells you a lot about the people and the organization generally and how they would respond to tragedies. Given the fact that it was an altering event it would change everybody’s view of everything. I was interested to see how they, the organization, and the people in it had learned from the prior incident, which had occurred in 1986. I was interested in seeing what was on the shelf that was derived from that experience. And what was there was a reasonably good product. There was no product before Challenger. As a consequence the way NASA reacted after that event was to just turn off all public communications. They just didn’t anticipate that something like that could happen. It was interesting to see when I had arrived whether or not they had thought about it sixteen years later. And they had. It said what needed to be upgraded and what didn’t. It was a useful exercise.

What about rehearsing and updating the plan? Was that important?

My impression of [the plan] was that it was a relatively good piece, a good foundation. But relative to other similar contingency type plans for other comparable kinds of activities, I asked them to benchmark what we had similar to what other organizations had. I wanted them to pick out things that were better about their plan and adapt it to our organization. And then to actually go through and exercise the plan, in a simulation type environment helps. Part of the plan is creating an investigative body immediately. Rather than sitting around the table on the day the accident happened and thinking up names, I wanted to have people appointed to that task well in advance. So there would always be a list in advance. Simulations help to make sure that everybody on that list knows that they are a part of that body and know what to do, who they’ll be hearing from. So I had the space flight folks make up an event that would prompt the triggering of these activities. So you would go down the list and call the numbers that were on the list and make sure that they really were the numbers that were listed and each of the people on the investigative team knew they have volunteered and agreed to do so. So that morning when it happened they would know what was coming. The value of exercising it was demonstrated to me more vividly than I ever would have dreamed.

Explain the day that Columbia happened. How were you notified? Was the crisis plan utilized the way it was supposed to be? How did communication with the media go?

Yes the plan worked about as well as you can image given the tragedy of the day's event. There was a lot of emotion and a lot of sadness around the whole event. Nonetheless it didn't deter people from going down the list, if anything the value of having a strategy or a plan like that minimized the emotional reaction people have, not because they didn't have it, but at least they had something to do. It worked much more effectively as a result of it. I didn't need to be notified I was there. I was standing there with the families of all the crewmembers at the Kennedy Space Center on the runway waiting for Columbia to come back and when the appointed hour passed we all knew there was something wrong. So it was within half an hour roughly of the breakup that it was pretty evident to everybody. My responsibilities under the plan were to notify the President and call the chief of staff. So I went down that list and did what I had to do. It worked pretty flawlessly in that respect. But it was a rough day. It was the roughest day of my life. Working with the media was an interesting challenge. The president had told me that he would prefer that I did some kind of public announcement and that he would follow. When we talked he wanted to know where the families were, how they were doing. He wanted me to do my press conference and then we'll tell the White House press folks that we would do a press conference here. He said at some point he would like to speak to the families. Not many funny things happened that day, but the media was involved in one. I was sitting in a room and CNN was on, but it was on mute. I looked at the screen and in the crawler at the bottom it said NASA press conference at 10:30. I looked at somebody and said, "Who's having a press conference here?" And they said "Well you are." And I said, "What do you mean?" And he said "Well it's in the plan." It says within two hours we would have a press conference, and it was almost two hours from the time within when we became aware of the accident. Well at that point we didn't know what was going on, we were just then getting preliminary information, so we pushed it back to 1 p.m. and by that time were able to give the media all the facts we knew, so we could tell a complete story of what was happening. But at 11 because the plan called for it, because the plan called for it, we were gonna do it.

NASA was credited with open and honest communication following the disaster, but ran into some trouble with speculation. What do you think happens to an organization when people speculate before knowing causes?

On the day that this occurred and for the time thereafter, so much of what you learn from these experiences, and it's a tragedy to learn it this way but it is a lesson, is that you set the tone for a lot of things. What you do in the earliest going sets a very strong tone for the way things are going to go thereafter. And by being open, candid and earnest about what we were doing, what we were engaged in, it really sent a very strong signal in addition to what I instructed to people and directed to people that we need to be open about this. And if I was acting that way then everyone knew it was okay for them to act that way too. So it created kind of a tone at the top kind of thing and its important to be mindful of because in the middle of situations like that, people in those kind of capacities were just trying to react, but that sets a tone too. So before our press conference I had enough time, at least 10 or 15 minutes to put together an outline saying

these are the points I'm going to make. And the tone was captured with a phrase that I used that captured everyone's imagination thereafter, which was "we're gonna find out what happened, we're gonna fix it, then we're gonna fly again." And in that terminology was, we're going to be very open about what the problem was, because we don't know and we want to find out what it is and then once we understand that, we're going to do what we got to do to fix it and rededicate ourselves to the task. And it settled a lot of things very fast, just in the phrase. It stopped people from wondering what the future was going to be like, if our employees were still going to have jobs. So it created the right atmosphere for people to feel like we need to go find out what happened here, so we could all find a solution together and we can all get back to doing this. And that worked about as effectively as anything I could have done. That's what hit me as being the most important messages to put forward in terms of what do you do from here on. So the speculation stuff was inevitably going to happen. I don't know who contributed to it, but certainly I'm sure reporters had something to do with it, other people had something to do with it. It usually happens when there is an absence of facts or data or information or whatever and in the beginning something you have the least amount of is reasonable, reliable facts. So speculation runs rampant, people love to fill in the gaps. In the days and weeks that followed my challenge was curtailing the engineers around NASA who would speculate on what they thought the cause of it was, based on incomplete facts. So I got belligerent about laying out the facts and saying this is what we know, and this is what we don't know.

What specific communication strategies were used immediately following and in the weeks/months, etc. after the accident? Focus on internal audiences? External audiences? Who were the publics that you and the communication department were focusing on most?

NASA's a big place. It's 20,000 people with ten different locations of scientists and engineers and technicians and folks who have nothing to do with the shuttle program and some folks who have a lot to do with the shuttle program. So you get all these very wide ranging disciplines and backgrounds and perspectives that stretch all over the country. Trying to get everybody to feel some sense of responsibility for it was a very important role. In my mind it was critically important that everybody feel some sense of accountability. We all had some role to play. NASA TV fortunately is an instrument, a capability that broadcasts not only to the cable providers who get it, but is an in-house capacity to broadcast anytime you want, so I used that regularly. We had agency wide town hall meetings to talk about this, the developments, how it happened, what's going on, why things occurred and all that stuff. And it was a very important communications mechanism. And I sent an e-mail everyday and did all the normal press stuff. I talked to all the center directors regularly.

You've made comments about NASA's organizational culture. What do you mean by NASA's organizational culture, and if there were problems how did you fix those?

A lot of people to offense to that, because the notion was that there was something wrong with their culture, and I had to go to great pains to say, no there isn't something wrong with it, it's

just that the focus is in a specific direction. The safety mindset at NASA is obsessive. It is an element that defines the attitude around the agency. So the attitude was how could this possibly have happened here, and how can you tell me that we have something wrong with the culture here when we're dedicated to safety objective in ways that put everybody else to shame. You have to look at them and say, what constitutes safety and it comes down to industrial safety practices, but in a larger sense, that's a tactical thing. In the broader strategic view there wasn't enough of a soul search over the things you didn't know the answers to. Looking at thing that you don't know the answer to, asking why not, that was missing. Foam had hit the shuttle many times. So the engineering mindset was that if you had something that had happened enough then it wasn't a big deal. You have to have the inquisitiveness to know why something is or isn't happening.

Looking back at the situation are there things you would have done differently?

I've lived my whole life, my professional life of making the point to never look backwards. No amount of time that you spend doing that is going to change the event. All the time you spend looking backwards always detracts from the amount of time you could spend looking forwards. I don't have any reservations about it, it is what it is, the record is what it is. I did the best I could at the time and knowing what I knew at the time.

Excerpt from conversation following interview:

Everyone of these incidents, I don't know if there are better or worse public relations or public communications responses, it's the combination of events. But the one variable is when you're in a position where there is no strategy on how to deal with it, it just gets worse. It compounds itself. There's no guarantee that its going to get any better on the front end if you have concerns added to it, but you have to have an approach on how you're going to respond to it, but it isn't likely to get exponentially worse.

Interview with Paul Pastorek  
(Phone Interview, December 18, 2007)

What was your position at NASA and what did that entail?  
How did you end up there?

My dear friend Sean O'Keefe and I went to college together and we've known each other over the years and he asked me to leave the private practice of law and do some government service. So I for some strange reason decided to do that and actually worked for NASA from February of 2002 to June of 2004. And I served as general counsel there; general counsel is the senior legal counsel in that agency. And I had some other responsibilities too because of my relationship with Sean I tended to be very involved in the decision making of legal matters and so as a result when the accident happened I tended to be involved in, certainly there were many legal issues but other issues as well, communications and legal and you know a lot of technical relationships as well.

Can you give a brief description of what a normal day looked like? What were your day-to-day activities within the agency?

Best way to start is you know I ran an organization of about 130 lawyers and so you know I managed that organization and during the day I would have issues related to that and legal issues that were related you know basically NASA's legal issues were focused around procurement as a lot of the money NASA spends is on contractors to do all of the complex work and on patent law ... And then we have a contingent of lawyers for international law and space law, believe it or not you have to know a lot about space law in order to deal with international work and then we had general law, contracts, human relations, employment and labor and stuff like that, normal stuff that any organization would have. So probably on any given day I'd spend between twenty percent and forty percent of my time really focused on legal issues. In the remainder of my time I served on the executive staff to Sean, so we would spend time in various executive meetings working on any number of issues. So for example we'd work on legislative agendas, trying to get budgets for our programs, communications issues, we'd work on technical issues you know people would...give you a crazy example we had to deal with the safety associated with launching the shuttle at Cape Canaveral and get into a lot of discussions with the Air Force as to who controls the space range firing at Cape Canaveral and we would get into a lot of discussions around how many people could be in proximity within the launch vehicle at launch and that leads to how many visitors could be at the site and that sort of thing so there were any number of either technical related issues or business related issues or political related issues that we would take up in executive staff type meetings so it would involve quite a bit of time on that. To give you an example a little bit bigger picture NASA headquarters operates out of Washington, DC but NASA has ten operational centers with a number of sub-centers that operate all over the country so you know we would be working, I would be working on legal issues in the centers or I would be working on administrative management issues on Sean's request. You know I have the privilege of going out and handling difficult problems that had to be handled at Sean's request so I would be, I was kind of an advisor without portfolio, a lawyer and an advisor within management.

Describe the day of Columbia. How did you find out? How were you involved in the communications efforts following the accident?

You know there is a person who is responsible for the flight and everything to do with the flight, that individual Bill Reedy was at the shuttle landing facility, Sean was at the shuttle landing facility and I was. So we, all three, were standing at the runway, standing not too far from the families in the stands waiting for the shuttle to land. It was actually a pretty nice day for landing, I can remember it like I was standing there right now, there were some low clouds at about 4,000 feet they were thin, and kinda caused a little inability to see what was going on but nonetheless it was adequate weather to be able to land and while we were standing there we started hearing over the loud speaker, you can hear Houston folks talking to the shuttle, and there came a point we weren't, we were relaxed and talking to different people saying hello generally being social, we then noticed that there was some discussion over the loud speaker, call checks for the shuttle that were not being responded, so Bill Reedy, who was the head of space operations at the time, pulled his book out came over to us told us that the signature double sonic boom had not gone off as expected. The sonic boom signals the shuttle has flown overhead and is getting ready to land, when that happens precisely on time and so we realized that had not happened and we knew something, we had been hearing the call checks go unanswered and we knew that

something at this point had happened and Reedy probably understood it much better than either Sean or I understood it, he pulled out his book that he had with him, a three ring binder that had the plan and we began immediately following the contingency plan. The first thing to do was get the families off the stands and out of view from the media and second thing to do was to call the President and then were a whole series of phone calls that had to be made. We didn't get the President directly but Sean spoke to his chief of staff and within a short period of time we were in a car following families to the location, astronaut locations, a residence where the astronauts reside and then we went through a whole series of issues, dealing with media, writing comments for the media, our media person, our head media person was not in Florida so I ended up writing comments for Sean, we did a teleconference right after one o'clock we had the President speak to the families over a cell phone feed and a bunch of stuff like that. We basically stayed, the three of us stayed at Kennedy for the entire day, we finished the beginning of the recovery operations from Kennedy and probably around eight or nine at night we flew back on a corporate jet back to Washington, DC met with our senior staff at eleven thirty that night and plotted how we were going to deal with various issues until about one o'clock that morning and I think Sean was on the Sunday news that next day around eight o'clock that morning, he spent the whole morning on TV being interviewed by various assortment of people and Reedy and I were in the background helping him out.

What about in the days that followed, what roles did you play?

Well the three of us really played a very team role I suppose. Dealing with all things, dealing with principally and primarily the families and all sorts of things that were related to the families such as taking care of keeping them out of the media, that was one of our primary concerns trying to begin to deal with the consequences of the loss. That was once piece of it, you know Reedy probably took the lead on that but we would circle back together periodically in the days following that, making sure we were dealing with that making sure we were dealing with it correctly. On the Saturday after the accident Sean and I went over to meet with the President, his entire senior staff were in the oval office, explained to him all of what we knew at that time, I helped do the briefings for Sean, Sean handled it himself. And you know on Tuesday we flew down to Johnson Space Center, the President came down and did a memorial service, Sean came down on Tuesday or Wednesday on Air Force One, we went down a different way and went down for that and came back to DC had a memorial service at a cathedral there in Washington, the Vice President spoke and its sort of interesting I suppose because we at one hand had to deal with the families and the other hand you had to deal with the country and then there was a whole, another piece we had to deal with our international partners and then we had to deal with our agency. You know the agency is an unusual group of people frankly, not your typical agency, very united group, refer to themselves as NASA family and you had this loss and it had a real tremendous impact that had an impact on the employee workforce, a lot of guilt so we had a lot of issues to deal with internally and then we still had two astronauts flying in space at the time who were wondering how they were gonna get back home. So all of those issues, we had several funerals, several memorials we had to attend, then the hearings began in Congress, several hearings on why the thing crashed, all kinds of wild theories were being put out there, all kinds of wild investigations, probably the most remarkable was the environmental laws had changed and caused the shuttle to be made less safe because of how it was constructed and you know people then began concluding that the EPA brought it down you know. So there was all of that



we had to deal with, the government, had to deal with Congress hearings and investigations then we began working with our employees one of the specific things we did particularly in the legal department was work with our employees and prepare them for testimonies, media testimonies, congressional testimonies, we had three people who were identified as being on the watch at the time of the accident and there was some blame that was trying to be attributed to these three people, one of whom got up in front of the media and before she did we were able to get to her, to talk with her, to help her deal with the questions that she would be asked. Linda Ham was her name, and she was one of the three people who were really in the cross hair of the investigation, but there was all sorts of people who were involved in this. We had a whole series of issues dealing with the intelligence community and you know what our capability was while being able to assess the damage that occurred to the vehicle did we use any of that capability, we did not, why did we not, how were we going to in the future, there was just a whole host of activities that took place regarding intelligence. A lot of the data gathering equipment and processes and procedures the federal government had that were not used, but now will be used in ongoing flights so you know when you see them up there taking pictures of themselves there's other stuff that you need in order to ensure the safety of the crew. So all kinds of different things.

What was your involvement with the media following Columbia?  
How did the media treat NASA?

You know it was intended...within a week of the accident Time Magazine called for the suspension of any human space flight if that were to be true we would not be flying the shuttle today. We had the New York Times and the Washington Post in investigative mode, you know trying to find who this guilty party was and trying to hang them out to dry. We were very focused on wanting to give adequate protection to our employees from these signs of inquiry but you had a delicate dance because at the same time we did not want to prevent our employees from communicating with the media, at the same time there are rules on how and what we can release to the media. Around paper and public records requests. We had a number of different factors in dealing with the media. We had some employees that wanted to talk, some employees that didn't want to talk and all kinds of records, email traffic, all kinds of stuff the media wanted so in the course of that we were managing all those kinds of moving parts and so for example when people were talking to the media we were trying to talk to them so at least we had an awareness of what they were saying because as soon as they said something we were then going to be asked by the media to comment on it so what I wanted us to be able to do was to track the communications, not prevent it, but track the communications so we would be aware of it and Sean wouldn't be blindsided by someone sticking a mic in his face and saying Joe Schmoe said...then we are flat footed sitting there trying to answer the questions. Then we had people who wanted to talk to the media like Linda Hamm who I wanted to make sure they weren't going to get blasted so I went down and talked to her ahead of her planned visit which she insisted on doing because she was under a lot of scrutiny, people were making a lot of accusations, she wanted to defend herself. So my point was let's practice you defending yourself and I did this with a number of employees, let's practice you defending yourself and let's make sure you do a good job of it. So I asked some extremely hard questions of these folks before they ever got in front of the media to give them a case of what they might expect because when you get in front of the glare of the camera and the emotions and the anxiety you know you may say things that you don't mean to say, you may not really have a good answer at first, you might think about it

twenty-four hours later and have a superb answer and I didn't want all of those anxieties from prohibiting those people to answer those questions well so I practiced with them and we did a lot of that. And to some extent people were able to articulate better and to another extent they articulated to the same extent they were going to articulate day in and day out so we did a lot of that. Then around the public records we took the positions that we were not going to exercise our right as an agency to withhold any documents except for personal information. So we made huge releases of data and email traffic, I mean we did not seek any protection on that. There was only one area and we actually got into a whole question of interestingly enough executive privilege and that was around statements that were made pursuant to the investigation where individuals were told when they made the statement that they would be made in confidence so that we would be able to have them speak freely about their coworkers or about their superiors and got to a point where Congress wanted that to be disclosed and we refused to disclose that. That was the only thing I think that we ever refused to disclose, everything else was fair game in fact one of the things we did because we were getting inquiries from so many different people and then inquiries were going to Houston, to Florida and we couldn't keep track of them at the Washington office and as a consequence once again we'd be surprised so we set up a very sophisticated process to manage the flow of information and what we did was anything that was produced was put on the Web, not only did we produce documents pursuant to FOIA requests but we posted everything to the Web. The transparency was pretty high...yeah there was a lot on there. I guess there's still a bit on there. Our position was if anybody asked for it and even if they didn't ask for it we were gonna put it up there. We thought if it was material we were gonna put it on the Web. So you know I think and I'll go back, I'm sure if you talked to Sean you'll hear him say what Reedy said and what we said on the day of the accident was we were gonna tell the truth, tell it all and tell it now. And that was our mantra, we were gonna be as transparent as we possibly could be, except in that one case where we took the confidential statements, but by the same token I've been around the block long enough to know I've been a lawyer long enough to know that people say things that they don't mean when they're surprised and under anxiety and I tried quite a bit to prepare people for that. But I also interviewed people who had talked to the media. There was one guy who was pointing a lot of fingers and the other thing I do was I try to go interview people who had gone to the interview who said things to the media which I found incomprehensible or perhaps incorrect and I wanted to go find out about it myself because we would have to deal with the consequences of behavior associated with some of these accusations that were being made, we may have to fire somebody. So long story short in a number of cases we had people go and interview them after they had spoken to the media, find out exactly what they mean by this, that and nothing. And actually in some cases I went out and did it myself due the nature of some of these accusations. So that's the kind of stuff that I did.

How do you feel that your communication worked? Did that turned out well? Did NASA prosper by having an open and honest relationship with the public and the media?

I think that our decision to be as open, as direct and as honest as we possibly could was absolutely the best thing that we could do and if you compare it to after Challenger you know we enjoyed a benefit by the way we handled it. I think we were given a lot more latitude. I think when we said things to people they believed us because we were as transparent as we were. You can tell people the truth if they begin to be suspect of whether you're telling them the truth you can tell them the truth until you're blue in the face and they'll never believe you so after

Challenger we made a very specific, conscious decision not to repeat that. We put a guy on TV that Saturday afternoon for two and a half hours and let people, you know he was a technical guy, and let people...we said we were gonna put a technical guy on TV and let people ask him questions until they stopped asking him questions and he did and it was probably the best thing that could happen. Now he made, we had a number of other policies around communications we would not authorize, nor would we allow anybody to speculate as to what the cause of the accident was and this fella kind of blew us up. We were doing good I think in the media for about six days until he made his decision that we were going to hypothesize as to what did not cause the accident and of course you know that story. You know as a result we lost a lot of credibility and we violated one of our rules in order...you can't in a situation like this go out and defend your agency. Especially when there's an investigation going on there's all kinds of people...no one is going to believe you when you say it's not your fault and you know. Not only did people not believe us when we said it was not our fault they weren't justified in believing us because we were at fault. So that was a huge mistake and our mistake was that we weren't able to manage that. But you know people make mistakes and then you have to deal with the consequences of that and we did you know that was a whole, another issues, how do you deal with it when people make mistakes? We then spent three weeks trying to undo that. But we did and I think we got people back focused on the fact that we weren't going to try to absolve ourselves from this, Sean had to go to committee hearings and when we did the committee hearing ten days or two weeks later after the accident and a few days after this guy did that faux pas you know Sean handled it in a way that was very direct and very firm. A lot of people asked him to speculate, he kinda speculated on some things, which he later regretted. There was the famous comment, about the foam would have the same effect on the shuttle as a Styrofoam ice chest would have hitting your car while your car was traveling sixty miles an hour. That was a faux pas on his part, one technical person told him that and of course the implication was that the foam couldn't have done much damage to the wing so he fell in the same trap that we were trying to prevent others from falling into. But you know we recovered from that but he had to answer a lot of questions following that about that statement. So the lesson learned in all of this is that when you're involved in a disaster of any kind you do not speculate on what the cause of the accident is but rather you communicate around what the facts are and express you know your willingness to accept the findings of the independent third party investigator whatever they may hold and more importantly we are going to follow the recommendations, come what may and that was another whole big issue when the recommendations came back down. Would we follow them sight unseen? There were a lot of people within the agency that didn't want to, but we ultimately decided that we would follow the recommendations sight unseen and you know people believe that if we did that we might never fly again because people weren't actually sure that we could meet the recommendations but in the end we were not only able to meet the recommendations but we were able to surpass the recommendations.

Interview with Glenn Mahone  
(Phone interview, March 27, 2008)

While at NASA what was your title or position?

I actually had a couple of positions, but I will give you the one that was the most recent and that was Chief of Strategic Communications and Assistant Administrator for Public Affairs. I kind of had a dual role and I was also the press secretary for the agency.

What brought you to NASA? Why/how did you begin working there? When did you first start your career with them?

I was actually a political appointee, appointed by President Clinton to go to the US Equal Employment Opportunity Commission and while I was there I was the chief spokesperson and senior advisor to the chairwoman who at that time was Ida Castro. And I had been there for about eight months I guess and there were some specific problems in the press area at NASA and the people in the White House personnel actually asked me if I would go over and see if I could help that situation out.

What kinds of problems were going on that required you to go over to NASA?

It just wasn't a good press operation going on at that time.

So when did you arrive at NASA?

I moved there in I would say April of 2000.

When you were at NASA what were your kind of day-to-day duties or activities?

Well I was press secretary, so when press inquiries came in they came to me, certainly those that related to the administrator. I also did speech writing for the administrator and I also traveled with the administrator and press people generally will do that.

On the day of Columbia, were you with O'Keefe that day?

I am normally but that was the first landing that I was not scheduled to go down to, I actually took myself off of the plane and the reason why is because the following Monday we were going to have a budget rollout and I actually sent my assistant down in my behalf because later that afternoon Sean was coming back to Washington to go through a rehearsal of the budget press conference. So I had decided to stay here and plan for that, I generally put those together. So I decided to stay and it was just interesting that on that particular following Monday, a Monday following a landing so I just chose to stay here in Washington.

Since you weren't there at the time, how did you find out about Columbia?

Our crisis communication plan calls for my notification immediately no matter where I was, whether I was with the administrator or whether I was in Washington or Russia or wherever. Part of our crisis communications plan was to notify me and then generally I would have notified the administrator had I been with him but what happened was I was notified through our plan. And I think I was probably the second or third person to know.

How did you fit into the crisis communication plan? Why do you think it is important to have a plan?

Well I was the person who had the responsibility for of course determining how, when and if we talked with the media, press conferences and all of those. It was my decision based on how and when we would have information and when we would be prepared to put that information out to the general public and what statements would be made. I played a role and a major role in writing the statements and moderating the press conferences and so forth, determining how long they would go, what questions we would take and what questions we would answer and at what time. And the crisis communication plan is just a very integral part of any crisis. You have to have a plan; you can't go into it blind. It's very important that you sit back and you plan ahead for any eventuality whether that be a catastrophic accident like Columbia was or a pileage lying in a test plane or whether that's an explosion or the International Space Station falls from the sky or any of those things.

After Challenger there was not a good plan for dealing with the crisis, how was that problem identified and what was done to fix it?

I think I can attribute it to, the problems that they had dealing with Challenger, but I also think it helped us in that we saw the mistakes that were made with Challenger and that we were not in a position to want to let that happen again.

Did you help write the plan?

Yes.

And how did that process go?

Well there was one that was together and you really had to update it constantly. There was a skeletal plan and what I did was pull a team together and we sat back and improved on what we had and that was a constantly. You always try to update, upgrade based on anything that you think might very well be a crisis. And you role-play with it and you have practices and so forth and you work it and that's exactly what we did. And we made sure that people had it, that's the most important thing, you know you have to have it out there to the people who would play a role in it so that they wouldn't make mistakes.

How did you reach everyone that you needed to speak with especially those internal audiences?

It was through the plan, and at that time all of the centers basically reported up to headquarters so there were constant telecoms and video teleconferencing and so forth to discuss issues and of course one of those issues would have been the crisis communication plan. So it's staying in touch, but when you have one person who has the overall responsibility and the tentacles are reaching out from there it makes all the difference in the world. I mean there has to be someone in charge and there has to be lines of communication that are set up so that even if that person is indisposed or something that you're still ready to, or that there is still someone there to work it.

Does NASA as a public sector organization differ in its crisis communication strategies from private sector organizations?

Well we were responsible for notification to both the administration as well as to our congressional oversight committees and so forth so they were a part of it too in terms of making sure they were notified, making sure they knew what was going on because they had constituencies that they had to talk with so there was a component built in for notification to them so that they could have the information that they needed to be effective with their constituencies. And of course we wanted to let them know and keep them informed you know just from a standpoint that they needed to know.

So is there a difference in the way a public sector organization and a private sector organization must communicate?

Oh absolutely. Private sector organizations can give you what they want to a governmental organization basically, I mean there's freedom of information and it's best to get that information out there because the public has the right to know, they pay for it.

Looking back at the situation now, is there anything that you would have done differently or did sticking to the plan really work?

I think we stuck to the plan. There were times that we probably gave out more information than we had to, but I think we benefited from that. We were having press conferences every couple of days, keeping the media informed so that they could keep their readers informed. Because of what we dealt with, see we didn't just deal with a space craft blowing up we lost people, and so when you look at the people element you know you have to be very, very careful you know because there are families and so forth so you have to be careful that way.

What about dealing with the media? What was the relationship like between NASA and the media at the time?

I think that we probably had the best operation going and some of the best media partners that we could have asked for. We were an open organization and that's what I tried to do. When Sean first came in I tried to make sure that we built some very, very strong camaraderie's and let them know that they could trust us and that we were not going to keep things from them as much as we could keep things from them and I think that that made a difference, I think that the entire relationship that we had with the great majority of the media during that time was just great. They respected us and they like the way we did the job with them. We were open with them, that's the big kahuna. We were getting the information out.

Can you walk me through the day of Columbia, how you followed the plan?

I was actually not at headquarters, it was still a little early, I was actually at home and I received a telephone call on my cell phone and was informed that we had a situation and I don't remember the exact words and that I needed to come in. Of course I started asking the questions right away so I stayed and the phone and what I had gotten from Paul Pastorek, Paul indicated

that I needed to prepare something for the administrator to say. So I at about eighty five miles an hour drove from my home to NASA headquarters and got there and started preparing a comment or a speech for Sean, finished the speech and what happened was we couldn't find the appropriate fax machine to send it to, in fact we sent it to two or three and for some reason it just didn't get to them so I think Sean and Paul based on my conversation with them via phone kind of put together a speech and Paul kind of spearheaded that activity and Sean actually went out and read it after the, after we knew that Columbia was lost. Then I pulled together the team back here in Washington from a communications standpoint and we had also notified everyone that was a part of the crisis communications team, not just communications portion, but then the agency portion as well. And then we went into what I called our war room and we sat and started disseminating information, started looking at information and at that point started deciding what we were going to put out when Sean returned to Washington and go from that point. And while remembering that we had a budget rollout that we were going to do the next day also.

Did that still go on as planned?

I think we cancelled it for a couple of days but it was done within that week. And it makes all the difference you know in the world. You know you still have to go ahead and do you work. Because of an activity like that, you still have an agency to run, we still had International Space Station up there, so we still had a lot to do.

Interview with Jennifer Wood  
(Phone interview, April 3, 2008)

How did you get to NASA? What made you want to work at NASA?

I've always been passionate about human space flight and astronomy for that fact. Growing up most girls favorite movie wasn't my favorite movie which was "The Right Stuff," so I've always been a bit of a space geek so I never really thought of, even though I wanted to do communications my whole life, I never really thought of having the opportunity to do it at NASA and I was in the White House Office of Management and Budget and knew Sean O'Keefe, he was our Deputy Director at the time, and obviously when he got nominated I started bugging him. I was definitely enjoying my time at OMB but I considered it a once in a lifetime opportunity to be able to go and work at NASA.

What were your day-to-day duties? What did your job entail? What was your title or position that you held?

Well I actually held a few titles while I was there, but my initial title was Senior Advisor to the Head of Public Affairs, Glenn Mahone. Basically served as his right hand person, served as his back up, he was also at the time the press secretary, he was holding dual roles so I would serve as his back up for any interviews that our senior staff including the administrator would participate in and then basically you know help him with strategic planning as far as communications and it really almost changed day to day what I was involved in. After Columbia you know when the Columbia Accident Investigation Board came out with its results and we came to the conclusion

that internal communications was obviously a weak spot for the agency at the time Glenn and Sean O'Keefe asked me to develop an internal communications office there at headquarters so my position changed at that time and I became the Supervisor Public Affairs Officer, but my informal title was internal communications manager so I hired a staff, created a budget and we started trying to figure out different mediums and communications vehicles to really help increase the internal communications there with the agency.

While we're talking about internal communications, could you go a little further and describe some of those vehicles?

Sure, we did a survey and tried to look at the different ways the agency was currently trying to communicate, you know both horizontally and vertically and what was being effective and what obviously wasn't being effective and we came to the conclusion that there was a couple of changes that we wanted to make right away. There had been an employee newsletter that went around and each NASA center, as I'm sure you're aware there's ten and then headquarters makes eleven, each NASA center had its own newsletter, the headquarters newsletter was very headquarters-centric and it wasn't going out to the different centers, so that was the first thing we wanted to change. We wanted to make it more an overall agency document so it would serve dual roles. Not only would it be an exciting document for all our employees to see the great work that was happening throughout the agency instead of just at headquarters. It allowed employees to get involved and see what was going on and see their face even though they might be out at JSC or JPS they were in a headquarters publication that was going out to all the centers so everyone kind of got an idea of what everyone else was working on, which was a new concept for us. There wasn't really any kind of document that was doing that. And so we also started sending it up to the Hill because it was a great way for us to be able to show our members of Congress exactly what the NASA funding was going toward, the great science, the great research and how it really was beneficial to continue to invest in this amazing agency. We also did things like put flat-screen TVs at the elevators and ran slides that flashed across that were vibrant, things of that nature to let people know what was going on, whether it be about a blood-drive or safety training or things of that nature to try to make it more interactive.

Did those things change the internal communications or the internal environment of the agency?

I think it was a start. Unfortunately after I got the office set up and got all the guidelines into place about the different mediums and communications vehicles I left shortly after because my home state senator, I'm originally from Texas, so my home state senator called and said I'm desperate for a press secretary so it was hard to turn her down.

After speaking with Glenn Mahone I know that he was not in Florida, but sent you in his place. Can you tell me about your experience with Columbia and what that day was like for you? Did you immediately begin using the crisis plan?

Well obviously it was a very sad time for us as an agency and as a nation. It's defiantly one of the things that will be with me for the rest of my life that experience, and you know it was life changing. That was going to be my first landing, I'd been to several launches, but had yet to be at a landing so I was very excited especially with the great work that astronauts aboard Columbia



had been doing I was just I couldn't wait, I was thrilled to be going. And as serving as Glenn's proxy for the administrator as well as other senior officials it seemed like a natural fit that I would go down. So I traveled with the administrator down and everything seemed fine that morning. I remember leaving the hotel and getting on the bus and hearing the update you know saying they were doing the orbit burn and everything was looking great, was very excited. Went out to the pad, or the sorry not the pad but the runway, the tarmac and had just finished walking over to the reporters. Talked to Mike Cabbage, I remember specifically from at the time he worked for the Orlando Sentinel and said obviously this has been a great mission, we're looking forward to a great conclusion, we'll bring over the administrator shortly after they land so you can kind of get an in-person debrief and share some of the excitement and the news from the mission. About the time I started walking over, back to the administrator and Bill Reedy, we started to kind of figure out that something was wrong. The clock was winding down and we hadn't heard a, you know the two sonic booms, so we were starting to get a little bit nervous, but I don't think anyone really fathomed that that could have actually had an accident at that time. Walked over, it was all kind of surreal at that minute, Bill walked away, the clock ticked down to zero and then started going negative numbers everyone just kind of knew in our group. Bill Reedy came back informed us he had heard from JSC (Johnson Space Center). I think the first that I remember after that was the families were gathered up and put on a bus at the same time we were. Took the administrator back to the head KSC (Kennedy Space Center) building there where the regional administrator's office is and the plan was immediately put into action, our crisis communication plan. After I knew that things were squared away with the administrator O'Keefe I left and went back to the main press office building to see how I could help them directly. I remember working on the first draft of the press release, we talked about how our first priority was obviously search and rescue. I remember making a call to one of my friends, Rebecca Davis who was at the time dating the press secretary, Ari Fleischer, I wanted to see if Ari was aware of the situation you know if he knew the status of the vehicle and what we were currently involved in, found out that they were both on vacation and so he directed me to call Scott McClellan who was the deputy press secretary at the time at the White House. So made sure that he was aware of what was going on and continued to work on that first draft and really we just went down the checklist which obviously Glenn was immediately involved as soon as we started implementing the plan. I remember there was then obviously a call with the President and the families. I remember working on remarks with Sean for his address that came later that afternoon and then obviously the moment we found out that it wasn't really a rescue mission it was a recovery mission. I don't remember very much after Sean went on-air that late afternoon or evening. I know we were there until late into the night, I think we flew back in the wee hours of the morning. But then obviously the next two weeks were just, everyone working twenty-four seven to find out you know how to prevent something like this from happening again, to make sure we were being as open and forthright with the media as we could be, there was daily briefings, I mean it was just an all out effort. Which I think you know there was obviously press accounts that shed, you know it was night and day between Challenger and Columbia as far as the media relations effort to make sure this was open for all the public to know what the situation was and as we found out they found out. So I do think it was, I think it was an event that showed that the agency had learned from its prior mistakes, obviously with space flight being human space flight, space flight in general being inherently dangerous because of the situation, I think they learned the most lessons they could at least as far as communications and they put those into

action and made a new plan that was better and that really helped the nation, especially in this twenty-four seven world know what was going on.

Was the crisis plan followed as written? Were there changes that had to be implemented?

From what I can remember the plan was stuck to pretty closely, fairly closely and I don't remember deviating off the plan that much. I think there was some adjustments, but I don't think they were that major that I can even remember. I do know that there was obviously a review again of the plan after there had been a conclusion in the Columbia Accident Investigation Report after it had come out and I think there were small tweaks made here and there, but overall I think the plan is very good. In fact the plan is so good that I really would consider it a good base for any organization, let alone a government agency, to be able to use and adapt to fit their particular needs. I do think it was effective. It's never easy in a situation like that, whether it be a regional issue for some organizations or it's a national or actually international you know emergency like it was for us at NASA, I think they did work on the plan enough and turned it into a good document to where it was useful for all, for people at NASA, the entire federal government, and then obviously the public at large.

Why do you think it is so important to have a plan in place?

The fact is, it doesn't matter how safe one's workplace may be or think it is. If you're just going in day in and day out things can always happen, you hear about it everyday, someone goes into an office building or a grocery store and a mass gunman, you heard about last year with the mall issue. The fact is, no one should be without a crisis communications plan because we live in a world and day and age that warrants it. I mean there really is no excuse for not having one in my opinion. It's one of the first things I ask of specifically when I go in for a job interview, because if they don't have one I want to be somebody working on it. I want to help that company be prepared, or that organization be prepared or that agency be prepared.

Can you describe your involvement with the media in the days and weeks that followed?

Well I wasn't a spokesman for the agency, in my previous jobs before then I had been, but my role was more of an advisor so I worked with the media, but more off the record at NASA. So really I just tried to serve as a resource and I think as any good reporter should be they're continually ravenous for knowledge and so that's what we did, we did our best to help them have all the information that was possible to give as we learned it and I think there may have been slight a few moments of frustration with the agency but you know I think they saw at the end of every day we were doing our best to get them the information and because of that I think they respected us as a team, respected our plan and kept a good relationship with the agency after.

Why do you think it's important to have open communications?

Well especially at a federal agency I think it's imperative, in my opinion it's imperative everywhere, but especially at a federal agency, those are your tax dollars at work and you deserve to know what's going on. At NASA we are using the taxpayers dollars to achieve great feats, I mean you see what happened later on with the Mars rovers and all that we're still

learning from Spirit and Opportunity. I think that it just goes to show that you know especially for the federal government that people have a right to know and the media has a right to know and the right to properly inform the public and I think that's something that people sometimes you know take for granted is if you're willing to work with the media you're going to get a better story anyway and a more accurate story and that's what matters at the end of the day. I mean regardless of what the opinion an individual or a tone that an individual or group might take in the piece all that matters is the accuracy, really and truly. And so the more willing you are to work with them the more accurate the story will be most likely and that's better for the public.

Do public sector organizations like NASA face different challenges than private sector organizations?

I do. I think obviously that no matter what organization, what type of organization you are you should conduct yourself, your business manners most forthright and truthful manner that you can, but I do think that federal agencies are held to special standards but at the same time I agree with that. As a taxpayer myself I believe that that is their obligation, to truly be open, honest, forthright, let us know what's going on and that way we can determine if changes need to be made and that might mean, it doesn't always have to be a negative change, it could mean more investment in that agency if they're doing a great job and it's leading to wonderful benefits for our nation or in NASA's case mankind.

Interview with Bob Jacobs  
(In-person interview, April 7, 2008)

Name, position at NASA

My name is Bob Jacobs. I am Deputy Assistant Administrator for Public Affairs here at NASA Headquarters. At the time of the accident I was News and Multimedia Director.

What brought you to NASA? When did you come to NASA?

I joined NASA in July of 2000. I was working at Associated Press as a project manager in the broadcast technology division and like a lot of people here had always had a fascination with space and NASA. I grew up with the Apollo program and when I had the chance to join the agency as news chief, I jumped at it.

What were your day to day duties related to your job?

Well then and now are different. As a deputy assistant administrator I'm responsible for the overall day-to-day operations of the Office of Public Affairs so that does entail news and NASA television and the website, but it also entails guest operation, protocol, FOIA, public inquiries, a lot of other responsibilities. At the time I was Director of News and Multimedia, which meant that I did more of ground-level supervision of the agency's news and information operation and was more hands-on involving NASA television. And we were actually in the midst of rolling out a new design for the NASA website, in fact it did roll out on February 1<sup>st</sup>, the day of the accident. So we were focused on that around that time of the mission.

What was the day of Columbia like for you? How did that day go? How did you find out about the accident?

What was interesting about it, and I can remember having a very specific conversation with our news chief, Doc Mirelson, Robert Mirelson, and Doc was talking about whether or not to come in that day, because it was on a Sunday, so it was the weekend. And because I had said we could monitor this from home, from between computers and NASA television and briefing that we could do this and Doc was like, well I'll probably come in anyway. And the reason why a lot of us weren't coming in was because we were coming in...later on that next Monday we were supposed to roll out the fiscal year '04 budget, and those budget rollouts are big affairs and require a lot of resources. So we were actually coming in that day to do a rehearse, a dry run of the event and to go over the Qs and As associated with that budget. So a lot of us were on the road, for example, I was on the interstate coming in from Fairfax at the time of the accident and Doc Merilson was here in the building, in the newsroom at that and he called me. I can't remember times or anything like that, but I was driving in, had literally just left the exit and had gotten on the interstate and the phone rang and Doc told me that we had lost contact with the orbiter. And immediately no one really, it hadn't registered in anyone's that accident, you know as the information, from mission control up it dealt very factually. At the time we just lost control with Columbia and that didn't really mean anything, but he called about ten minutes later and said they still hadn't heard from the crew, hadn't heard from the orbiter. So we went ahead and, we like most organizations have a contingency plan, a very comprehensive contingency plan. So after the second phone call we just started putting the plan into action, started calling people in, getting everyone into the building. You know of course by the time we got here it was clear the scope of what had happened.

What was the rest of the day like? Did you follow the contingency plan?

We started, of course there's a, you know the slang name for it's a "war room" but it's the Emergency Operations Center is opened on the seventh floor and that's where space operations is located, where the space shuttle program's located and it's a room with telephone banks and communications capabilities. It's much more robust now, but it was still reasonably robust then and it puts us in contact with all the space operation centers associated with...it has direct link ups. So once the contingency is declared, once there's an issue, of course JSC (Johnson Space Center) locks down the room which means that they close off all communications, all the information's frozen, it's like a giant snapshot has been taken at that time and nothing gets to leave and nothing changes. And as part of the contingency plan, the Deputy Administrator of NASA Fred Gregory was here at headquarters and started notifying the members of the accident board. Those members are selected prior to each mission and agree to serve on a panel in the event that there is an accident. Now one difference to that plan was that Sean O'Keefe, the administrator at the time, went outside and asked for Admiral Gehman to serve as the head of this panel. So those calls were being made for the agency. For us, communications wise, it was literally finding out what factual information we could release and as quickly as we could do it. We immediately put up a notification on the Web page and said a contingency had been declared. And as factual information came out we updated the Website and started working on the initial remarks for the Administrator. In the plan I believe it says that we would, there's a

goal to be on the air with our first remarks within an hour after whatever the incident was, and I believe we were actually two and a half hours later because what happened was after we notified the White House and everything...of course everyone has specific roles as you've seen if you've read the contingency plan. So once the White House was notified then the decision was made for NASA not to say anything until after the President was to make remarks. So as soon as the President made his remarks we were prepared to hold our first news conference down at the Kennedy Space Center, you know at least stating what we knew. For us it was very much the same, we set aside...the public affairs offices are located in the co-directorates anyway, but what we did was set aside part of the space operations center just as a public affairs area and we moved a number of public affairs officers over there. Normally there are three in that office and I think we augmented it, I think we ramped up to seven or eight at headquarters alone. We had phones installed, printers installed, basically a giant work area where we could start dealing with the volume of phone calls we were getting. And we just responded, releasing what information we could, as best we could, as quickly as we could. It was an on going process. I think most everyone was here at least 17 to 20 hours the first day; I don't remember what time I left. I do remember...just overarching facts and figures, most people are here it was about 21 days before they took a day off and most of the days in the early days and weeks that followed were easily 15 or 20 hour days. I mean you just came in first thing in the morning and picked up where you left off and just worked until the evening news cycles...we were doing multiple, the administrator was doing multiple live shots. One of the issues that we face was that we knew that we just had to create a machine to just keep providing as much information as we could at a predictable time. One of the things that can make a crisis frustrating for reporters is getting an update, but not knowing when that update will come, so they keep calling you to find out when the next update is coming and given that this was a worldwide event we wanted to at least be able to drive reporters to predictable times at which they could get the latest information. Now they could still call and we would provide for them whatever we had at the time...we were all doing radio interviews over the phone and that sort of thing, but we made a commitment to do two news briefings a day until the Columbia Accident Investigation Board was up and operating, until we officially handed over the investigation to the CAIB. So we were doing a briefing first thing in the morning from here at headquarters which was hosted by General Michael Kostelnik, who was head of the Space Shuttle and International Space Station programs at the time and the afternoon briefings were hosted at the Johnson Space Center on a more technical level, generally with Ron Dittmore who was the Space Shuttle Program Manager at the time. And we did that for the first several days, I want to say it went four or five days before the Columbia Accident Investigation Board took over. Now once that took over, once the CAIB took over we stopped those briefings because it was no longer a NASA investigation. You know we dealt with factual issues having to do with recovery, memorial services, return of the remains from the accident site to Dover, so there was no real curtailment in the news operations, but it shifted a little bit in that we weren't getting into you know potential causes or issues or information. One thing that helped us tremendously was that the administrator, Sean O'Keefe at the time, made a flat out determination that anything up until the accident, anything factual that we could release up until the accident would be released immediately, without a lot of editing, without a lot of...in fact we even set up what we called a rapid response team...CARRT Columbia Accident Rapid Response Team and what we did was looked at, because at that time it was just a flood of FOIAs and what we did was examine what type of information, kind of looking at the FOIAs and knowing what would be out there, looked at it, made a determination that it was factual, information that was

associated with the mission we just released it. We didn't wait for FOIA, in fact we kind of made an attempt to supersede the FOIA process because FOIA in it of itself takes time and there wasn't any. So I mean we did a collection of all emails that were associated with the discussions that had to do with the foam strike when it was, when they started focusing on that and we just released them in mass. And some of them, that's where you found a lot of conversations that were going on about trying to raise the issue a little higher and it never went anywhere else. So I believe we informed the discussion fairly quickly given that we were literally just pouring stuff out there, posting it on the Website, making it available through news briefings, but we made people available to speak with the media. In Houston, people in Langley who expressed some concerns, because the email traffic mostly had dealt with, during the mission time frame the burn through in the wheel well because no one thought the foam strike was on the leading edge they thought it was all underneath the wing so the concern was, did it hit the panel that flies open, that blasted open right before it lands. And they were worried that there would be a burn through and deflate the tire or burn through the wing that way. And you know a blown tire on landing is, could be just as catastrophic as anything else so there was a lot of this kind of back and forth conversations with engineers and we just took all of this information and released it as early as we could. In fact I remember one Congressional hearing, the Administrator took a lot of heat because the emails were released a day before this hearing and some members of Congress were very critical wanting to know if the Administrator had seen all this and of course he hadn't. And it was this double-edged sword because he had members of Congress stating how shouldn't the Administrator know all this information before any of this stuff was released, how could you not. But at the same time you know Sean made the point of, my direction was to release the factual information as quickly as possible without me seeing it. I'll see it, but I don't know that I should be in the process of getting in the way of whether or not this information is released, gets out. So I don't think that, it'd be interesting seeing how years from now communication professors deal with that, but that was, at least in terms of government and corporate management a very bold position to take because he just said that if there's information out there, get it out there and that helped everything we did.

Why do you think that was so important to him? Why do some organizations not operate like that during a crisis?

Well they should. It's interesting, I just completed a graduate program at Seton Hall University and we did crisis communication sections and we were studying Challenger and all the things that went wrong with the Challenger accident, not releasing information and things of that nature. And I came to NASA from the news industry, as a journalist, so I come from an area, it's funny I tell people I have three commandments when it comes to communications: first one is tell your own story, if you don't tell your own story someone else will tell it for you, bad news doesn't get better with age and tell your own bad news. And if you look at the corporate communication missteps, take aside the scope of the tragedy that was involved in the event, if you look at the communication mistakes generally they can be laid at the feet of one of those three issues. Either not telling your own bad news, not telling your own story or sitting on it for too long. And these are basic communication tenants that are taught in most management schools and communication schools and for some reason people forget it when they get out in the real world. So I'm sure it just had to do with Sean's background, he was former Secretary of the Navy, he was brought in on the heels of the Tailhook scandal going on there, so he walked in the

door of the Navy with a huge public perception issue for the Navy. So I never had a specific conversation with him about that, you know how did you get this, but it was clear that he did. And he was very specific, you couldn't cross the line, you have to be careful when you're being that open and that transparent, not to start crossing into lines where people are getting you to speculate about what may or may not have happened and that's not what we were doing. Their line was facts, and it was otherwise left up to the Columbia Accident Investigation Board, in fact in your research you may remember there was, Ron Dittmore caught some heat because in one of those early briefings he made some statement and said he did not see how the foam, it wasn't that definitive but they brought out a piece of foam, and I think it weighed like a pound and made some statement about how, we as engineers don't see how a piece of foam could have done that and Sean, we quickly pulled together a media roundtable with reporters not an hour or so after that briefing and Sean basically said appreciate the information and the insight but that goes a little further than what I as the Administrator am ready to go. All things on the table as far as I'm concerned that is possible, it's just as likely a target as anything else as a probable cause or a potential cause. And at the end of the day he was proven to be correct. So he was very sensitive to staying open to whatever the cause was. He said the first day he was going to let the facts lead us to whatever the cause is and deal with it from that standpoint. And he was also very upfront, he had a three tiered approach, we were gonna find the problem, fix it and fly again. So when the troops hear that find it, fix it and fly and that he's going to provide as much information as he could there isn't really anywhere to go in terms of criticism of the communication approach as to what the agency was doing. Some people were concerned that somehow we were gonna close doors once the Columbia Accident Investigation Board got started, but I think after the first couple of conferences of the CAIB, there was a lot of concern about its independence on the Hill, especially from Democrats on the Hill, but once it became clear that Admiral Gehman really was going to act independently a lot of those criticisms backed off. But again I think that its open and transparent communications is important, Sean got it and exercised it and that's why the agency, at least in terms of a communication response standpoint, fared as well as it did publicly.

Did you help create the plan?

Well, there were a lot of people who worked on it. I think anyone with any experience in communications doing a communications 101 exercise would be able to do it. It had to do with, what it needed to get done, public notification, what would we do with the Website, what would we do with NASA television, a lot of it had to do with what to do with guests since we had a lot of guests out there, how did you handle those guests, where do they go. So it was truly an agency wide effort, it was signed off by eventually the Administrator, the AA my boss at the time Glenn Mahone, the head of human space flight who at the time was Bill Reedy, and eventually Sean O'Keefe. It is something that we practice annually, we go through different scenarios and there is one for every mission and it really helped because we literally followed it page by page there in the first hours because...one of the things we had to get away from was that a lot of us knew the crew, we knew these people, they were colleagues, co-workers, some were very close friends. I knew them, I wasn't close friends with them, but I knew who they were. So there was personal grieving on top of having to get the job done and having a thought out contingency plan helped focus on what needed to get done, you know it served as a checklist and you focused on that as opposed to the scope of the tragedy. Getting back to emergency planning, one of the

things, and I've been involved in a number of emergency planning documents at television stations. You know if you walk into a newspaper newsroom or a television news room one of the first things they'll say, they'll call it their plane crash plan because that's probably the biggest thing that could happen in a breaking news situation is what happens if a passenger jet crashes and one of the things that I found in emergency planning is that they were very thoughtful and very exhaustive. They have names associated with who's going to do what and it was very detailed. The flaw of that plan was that it was built upon the assumption that something happened at 2 o'clock on a Wednesday when everyone was there and most of the time the disasters happened at 2 o'clock AM on a Saturday on Christmas Eve when there's no one there. So instead of getting bogged down in who is doing what, I think what helps, the way I approach our plans here and what I think would help other crisis communication planners is just focus on what needs to get done and let the people who are there at the time focus on how to accomplish it. Because it's very different when you're sitting there saying, well I'm supposed to do this but these four people aren't here, what do I do. No, you focus on what needs to get done and just stay in constant communication. We were doing multiple teleconferences each day with all the public affairs officers, we were organizing whatever the latest fact sheets were and making broad distributions, making sure everyone had the latest information and had the same information. We kind of divided the work, the field centers dealt with their regional media and as it changed or shifted, headquarters dealt with the majority of the network and the larger media, except for specific things that were accident...policy and investigation and big world stuff we were dealing with, a lot of the nuts and bolts stuff that were happening Johnson was still dealing with. But the biggest thing is that you have to have people and you have to have a plan that outlines what it is that you are supposed to do and I think that the contingency plan that's in the back of the space shuttle mission books are clear guidelines. And things change, we did a lot of things that weren't in the contingency plan. For example, there isn't anything in there that says...the contingency plan was built around the idea that we would have an issue at launch, it's rare, you know hindsight's 20/20 now, but no one ever considered having an issue on re-entry, you know you either have an issue at launch or you have an issue in space, no one ever thought there would be a problem coming down. In hindsight that seems pretty silly thinking because you spend 8.5 minutes going from 0 to 17,500 miles an hour at some point you have to dissipate that energy, so it takes just as much technology and forethought to slow down from 17,500 miles an hour to about 230 miles an hour at landing. So I think there were some fundamental shifts in the way in the way that we thought and in the way that we think, but we were having to deal with things like, there were hydrazine tanks that survived and fuel cells that survived re-entry and we were having to get notifications out to area media in Texas and Louisiana warning local residents not to touch any of the debris that they see and stay away from the tanks. We set up a totally separate news operation out in Texas in Lufkin and that area of Texas for the recovery efforts. So there were a lot of things in there that we found we needed to do that weren't covered in the contingency plan, but because the plan so clearly spelled out the things that we did need to do, it was easy to add on to it. The one other caveat I want to add to someone putting together a contingency plan is try not to make it so detailed that it limits you, because you can do that. Someone or some group of people have such a specific role or such specific acts that need to get done that you won't be able to respond and, oh look this has happened and we need to go right, but no the plan says we have to go left. So it needs to be as specific as you can make it, but at the same time flexible enough as to allow for what they would call in the safety world the unknown unknowns. You know there are known unknowns and things that they know could



cause problems but not know to deal with it, but there are unknown unknowns which are things that we don't know about that could cause problems and generally in a crisis often do.

How does NASA as a public sector organization, an organization who is responsible to the public and to Congress differ in its response to a crisis as opposed to a private sector organization?

Well it would be nice if it didn't. I think there are a lot of examples of corporate crisis communications of people doing it right. I think Johnson and Johnson with the Tylenol scare is generally one that is held up. Now it would be interesting to see how that would be handled today with the immediacy of the news coverage that didn't exist then, even in the late 80s when that happened, but the agency in it of itself was built on a foundation of openness.

Disseminating information to the widest audience practicable, I believe is the verbiage that's used in the original space act. The agency was founded as a civilian space agency and all of its activities were going to be as open as possible, which was in direct opposition to the way at the time the Russian space program was being run which was largely a military operation, operated in secret. So that culture just followed the agency throughout its history. Most of the times, I think much more often than not, the agency's been credited with being open and transparent. I mean we show our triumphs and our tragedies live on television for everyone to see, so we try to be as open and transparent as possible. Private industry is just a little different because they report to different, it depends on the job, you report to, the leadership may feel they report to shareholders or their own employees before they need to report to the general public and one of the first things that any corporate organization needs to identify is who are its stakeholders, who are the various people they need to communicate with when something goes wrong or even when something goes right. Is it the shareholders, is it the general public, is it the employees and one of the things that you don't want to do it leave the employees out because they are the ones that are going to help pull you through whatever that crisis is. So you need to make them feel a part of the plan and that's another element of a crisis plan that I don't believe is really in our contingency plan, but we deal with keeping employees notified and having them involved in what's going on as quickly as you can in terms of the overarching crisis communications process. We're probably one of the few government agencies who has openness and transparency written into its founding act and we believe it's a fairly good model to follow.

I've read literature that criticizes NASA's internal communications, communications within the organization. How do you feel about that criticism? Is it accurate? Is it hard to reach the 11 sites?

You're right, I think that to this day that is an area that, you know I think that we...the standard line is that we always want to find ways to work better and we do, both internally and externally. But I do believe that internally there are some areas that we can improve, we've made great strides in taking into account when there are big announcements or things need to happen, you know how do we find the work force, we need to talk. When I first got here they notified the workforce by the press release that went out to notify the media, so we've at least gotten to the point within the past five or 10 years where we've been taking into account the workforce and keeping them informed, if not before then at least at the same time as anyone else, and the majority of the time we tell them before hand. But we could do better; there aren't a lot of

resources dedicated to internal communications. We do have an intranet, but it doesn't have a lot of people working on it and the field centers tend to have their own internal communications operations. So I believe would could do a better job of working under one global internal communications umbrella, but they do a pretty good job of keeping our workforce informed as it is.

What was the involvement with the media like after Columbia?

You know it's interesting in having worked on the other side of the desk and through it there are phases that you go through and there is almost this, especially in the early hours, calling it a honeymoon period is a bit insensitive, but there is this compassionate period, goodwill, grace, compassionate period of about four or five days when you're not getting the unanswerable questions, the how could NASA allow this tragedy to happen type stuff. Everyone is so focused within those first few days with first just understanding the tragedy and getting their hands around what's going on. We had to coordinate with about 12-15,000 people in Lufkin and 20 different agencies were helping us and trying to deal with the workforce and everyone else. So you generally have a about a week when the media isn't overtly critical when they're not looking for holes in what you're trying to present. But after that initial wave of information goes and gets out there, then it starts to become a little more pointed, a little more critical, a little more news, the reporter actually just getting smarter frankly. We have a core press, a press corps that follows us and we know those people and they know the shuttle program inside and out and they know the orbiter inside and out and a lot of them know it much better than I do, or better than a lot of the communications people do because they grew up with the orbiter, they breathe this specific program, this specific element. But when you have an accident the scope of Columbia, you have all the reporters thrown at it and for the first couple of weeks you're literally having to give pointy end goes up lessons to reporters who are trying to figure out how to disseminate this information to their audience. So there's an education process that goes on with the reporting core, and then once more data's know, once more data's released...and I think everyone pretty early started looking at the foam strike. I don't think there was anyone, even though the agency, you know we were going to let the facts lead us to what the cause issues were, no one could have seen that foam strike and how the mission ended and start adding one plus one and seeing if you could get to two. So a lot of people were focusing on the foam strike and the discussion about it, a lot went on and that brought out a lot of the issues we had with that mission, such as not doing daily MMT, mission management team meetings, which was mandatory, on paper it was mandatory and we weren't doing them. Linda Ham took a lot of heat as a result of that. The fact that most of our computer models were outdated and even the Columbia Accident Investigation Board criticized what I believed they called management by powerpoint in the report. And that took us down to dig deeper as well because as the agency communicators we're flying at 20 or 30,000 feet knowing the overarching issues of management of the program but at the same time we have to dial down what did happen, what was supposed to happen, what information's out there. I think all of us came away with a much deeper and more specific understanding of the decision making process within STS or during STS-107 and what we do now as a result of that than we did going in. But overall there is this period of education with the media trying to feed those who know the program really well as best you can and at the same time try to educate those who don't cover NASA on a regular basis. And there were hundreds up on hundreds of them who didn't know anything about the shuttle program and trying to walk them through it

sounds not quite...but in some instances that's literally what you're doing. It's helping them understand not only the orbiter, how it works, but the basic management structure and how things were done during the mission and in government in general.

Looking back on the day of Columbia, were there things that didn't go as plan or thing that you would have changed?

Communications wise...well I'll fall back on that you can always do things better...and that the communications around Columbia did go well. I think that some of the things that we learned had to do with...we have a very comprehensive and proven plan and it takes you all the way up to the point of the Columbia Accident Investigation Board taking over. We didn't have anything that had to do with how to support and deal with the CAIB. We had to assign a public affairs officer who was going to provide television support, who's going to deal with their news conference and we learned all of that on the fly. So I think that expanding the contingency plan beyond launch, beyond mission activities I think is a valuable lesson for us and one that now those of us who have been through it kind of can anticipate and know what to do and maybe can do it a little easier. Now it's all transparent to the media and to the general public, there was a lot of behind-the-scenes teeth gnashing and running around and trying to figure out who was going to do what with this independent organization that wasn't independent, but was independent and what kind of support could we do. And we over thought all sorts of ethical issues, should we be issuing their news releases through our distribution system, on NASA letterhead? Does that feed into the perception that they're not as independent as they should be? So we had really long and deep conversations about how to support them and that was an important lesson. Overall I think the lesson for me to this day was that it reinforced my three commandments, if there's an incident get out there and provide the facts, don't spin...coming from the news industry, one of the hardest decisions a reporter has to make is when they have an opportunity to join an organization in communications do they do it, because they are seen by their colleagues, or soon to be former colleagues, as PR flacks and I'm not a PR flack. I run NASA news and information organization very much like a newsroom. It's fact based; now I could be accused of advocacy journalism, but I would argue that most journalists are advocates. The idea that there is objectivity in journalism is naive, especially in print where there's no requirement to be, and even in television there's no requirement to be although most people will argue that they are. Generally you're an advocate for your publication's position, its political leaning, you're an advocate for the community, for your station, you're an advocate for something. So I will plead guilty to being an advocate for the National Aeronautics and Space Administration, but information wise this isn't like running a contest for figuring out the new color for an M&M. We're not going to do that type work, everything is based in science, its based in technology, it factually accurate and we make editorial decisions just like any news organization makes editorial decisions because our editorial processes are run by people who came from the news industry. We try to make it as objective as we can and leadership has continued to support us. My job isn't to sell anything, a lot of people think it's my job to sell a program, we've got to sell Constellation or we've got to sell going to Mars, no we don't. Our job isn't to sell anything, my job is to clean the windows, I see my job as trying to give the American people a clearer view into their space program and as long as I operate from that side of the aisle. I don't have a problem getting up in the morning and getting dressed and coming to work, it's when I feel like

I'm having to sell something or pitch something that I walk away questioning whether or not this is the right thing to do and fortunately that hasn't happened yet.

The following comments were taken from conversations following the interview:

He [Sean O'Keefe] was dealing with so many things with the investigation he just wanted the information out there and whatever facts were out there, whatever he said, and he was willing to let the chips fall and that's rare in government and corporate communications where the initial reaction is to try to control it and spin it.

One of my biggest points is that you have to start a flow of information both internally and externally. You have to develop multiple paths of communications both in and out and then again focus on just releasing facts. What did we know? What could we confirm at that time?

I do believe that, historically and in communications circles, the way the agency handled it will be held up as a good example, but I would give anything not to have had to demonstrate that we know how to do that.

It starts with leadership and goes down. If you've got a leader that says we're going to be open and transparent then the rest of it takes care of itself. What you don't want to have to do is fight and bicker and beat people into doing what is right and our jobs were made much easier because Sean and the rest of the senior leadership just from moment one said this is how we're going to work and it really helped.

Interview with Michael Cabbage  
(Phone interview, April 28, 2008)

Can you provide some background on your career as a journalist? Had you always been assigned to stories about science or space?

I lived in Northern California in the early 1990s and went back to graduate school for a Master's degree in journalism and when I graduated in the spring of 1994 sort of by coincidence my wife had the opportunity to transfer with the company that she was working with and we looked at various locations. I had the opportunity to get on with a newspaper and she had an opportunity with her job to go to work as well. And when we put things side by side and looked at the opportunities that we had, and keeping in mind that we had two young children and were finding a good place for them to grow up we saw that both of us could go to work in Central Florida. There was an office that she could transfer to in Melbourne, Florida and there was a newspaper called *Florida Today*, the local newspaper of Brevard County and Cape Canaveral. Cape Canaveral and the space program and Kennedy Space Center and NASA were things that I had been interested in since I was old enough to be aware of what was going on current events wise. I had been a space buff ever since I was six years old. Immediately I was interested in doing that because of the possibility that I would get to write about space. So to make a very long story short we made the move, I went to work at *Florida Today* in the summer of 1994. I spent about a year doing various assignments; sort of a general assignment reporter at the bureau for a while and one of the people left the space beat. I applied for the job and was given it. This was

probably early 1995. In the mean time before that I'd actually begun covering space a little bit. Throughout the second half of 994 I'd covered expendable or unmanned rocket launches and had also helped out with the shuttle launches because that was always a really big deal. They would put a lot of people together for those coverage teams when the shuttle was going to launch because it was something *Florida Today* typically had spent a lot of resources and a lot of space on. So I continued working at *Florida Today* in '95 on into '96 and in '96 I had an opportunity to work for the *South Florida Sun Sentinel*, which is a much larger newspaper, located in Broward County Florida, sort of the Ft. Lauderdale are between Miami and Palm Beach County. It circulates all through that area and covered Miami, circulated down there as well. So it was a really terrific opportunity with the company Tribune, who was one of the better newspaper companies to work for. I went down there and ended up covering science and hurricanes and covered a lot of NASA stuff then took a trip to Russia to cover a Ft. Lauderdale astronaut who was the head of the Russian program office over there and had flown a mission to the International Space Station. When the space reporter at the *Orlando Sentinel* left to take a job here in Washington in the summer of 1998, the *Orlando Sentinel* was a sister paper, both owned by Tribune. Because I had covered space before and knew some of the folks at the *Orlando Sentinel* knew me, they contacted me and said would you be interested in coming up here and replacing this reporter who has left on the space beat and I said sure, that'd be terrific because I enjoyed covering space full time and I enjoyed living in Central Florida. That happened in the summer of 1998 and I covered space until May of 2007, for nine years at the *Orlando Sentinel*. Landed a job here at NASA Headquarters and went to work here the day after Memorial Day 2007.

Prior to Columbia, what was your involvement with NASA like? Had they been open with information prior to Columbia?

I thought that I knew NASA pretty well. As a space reporter we covered lots of issues that related to NASA and I followed NASA pretty closely. NASA, when compared to other government agencies, I thought always was pretty darn good. They were relatively open and in fact one of the better government agencies about responding to media inquiries in a timely fashion, about making information available through the FOIA requests, about making officials accessible for interviews, things of that sort. Even before I came to work here I thought they had a pretty good track record.

What kind of contacts did you have within the agency? Who were you most familiar with? Who handled the media inquiries?

Well the way that it worked, and the way that it still works is there's NASA Headquarters, which is where I work and it is what the name implies, it's the headquarters of the agency. And then you have 10 different NASA field centers, which are located coast-to-coast, every place from the Kennedy Space Center in Florida, to Johnson Space Center in Houston, the Marshall Space Flight Center in Huntsville, Alabama, the Jet Propulsion Laboratory in Pasadena, California, and there is a public affairs operation here at NASA Headquarters in which the main mission directorates, for example the Space Operations Mission Directorate, which oversees the shuttle and space station programs and the Science Mission Directorate which oversees inter-planetary probes and science satellites, things of that sort. All of those are located at headquarters, are

headquartered here and there are public affairs officers that are co-located in with them that help answer media queries that come to headquarters about those programs. In addition to that at the NASA field centers there are also public affairs officers who are perhaps a little more specialized in what those centers do and the specific programs that are sort of headquartered there. For example at the Marshall Space Flight Center, that's where the external tank project office is, so if you have external tank questions then obviously Marshall is a great place to call. Stennis Space Center near Bay St. Louis, Mississippi is where they test the rocket engines, so if you have a rocket engine testing question that's a good place to call, or you can also call Marshall because that's where they design the propulsion systems. So to make a long story short, if you're a reporter you interact with a lot of those different people at a lot of different centers. Now also as you know, reporter will develop sources, which aren't in the public affairs operation and are folks that you can call independently, at different field centers and throughout the agency. But if you're talking about the official points of contact for the agency that's pretty much how it works.

Assuming that you had been to landings before Columbia, how did those work? Were there particular procedures? How did you go about reporting those events?

The procedure for covering a space shuttle landing before Columbia, and really it's not changed much after Columbia, is there is a press site at the Kennedy Space Center...there are three landing sites for the space shuttle. One is Kennedy Space Center in Florida which is always the primary preferred landing site because that's where they process the orbiters for their next flight and it's much more convenient, it saves time, it saves money if you can land in Florida instead of landing elsewhere and having to bring the orbiter back to Florida. The transportation costs are things you want to avoid. The secondary landing site is at the Edwards Air force Base in Southern California. The third landing site, which is sort of a contingency landing site, if all else fails, if weather everywhere else is bad, is at the White Sands Missile Range in New Mexico and there's only been one landing ever at White Sands and as far as Kennedy Space Center and Edwards are concerned don't hold me to this, but I think historically since the beginning of the program, probably somewhere between 55 and 60% of flights have landed at Kennedy and probably somewhere between 40 and 45% have landed at Edwards. In fact Edwards at the beginning of the program was the primary landing site. So most reporters always would make their preparations to cover landings by going to the Kennedy Space Center. There is a large contingency of reporters who report on the space shuttle program who are stationed in Florida near the Cape. They typically didn't travel to the other backup locations; they were there at the Cape. Now typically how it worked on launch day, reporters would come in a couple of hours before the scheduled landing time or earlier depending on how closely you wanted to cover it and what you were covering it for: radio, television, print, Internet, whatever. Before the orbit lands, there is a de-orbit burn which essentially is the engine firing that takes the shuttle out of orbit and starts the re-entry process. That usually occurs roughly an hour before landing. The way the process would work is that once the people at mission control in Houston had decided whether or not the weather conditions were acceptable for the shuttle to return to Earth, they would make a call for this revolution around the Earth. If the observed conditions were good and the forecast conditions were good then they would give the go for the de-orbit burn and when they gave the call for the de-orbit burn the reporter typically would congregate down by these buses they would have at the press site at the Kennedy Space Center and which then would transfer you to the shuttle landing facility. Reporters would get there about an hour before the

shuttle's scheduled landing and would essentially wait there to see the landing. There wouldn't be a whole lot going on in the mean time, other than monitoring the shuttle progress on landing air to ground. Satellite trucks would also convoy in and there would be a handful of photographers that would get there earlier also, but that was pretty much the way it would work.

On the day of Columbia, how did that day go? When did you realize something went wrong? What happened after that moment of realization?

Well as far as the media procedures at the Kennedy Space Center were concerned it was exactly the way that it always had been. There was the trickle of satellite trucks that went over, there were a few photographers who went over early. Not a whole lot of people attended that landing from a media standpoint. It was on a Saturday morning. There didn't seem to be a whole lot of media interest. In fact if the first Israeli astronaut hadn't been returning there might even have been less than there was. It was the standard routine, they gave the call for de-orbit burn, the reporters who were there gathered around the buses. As I recall the landing was around 9AM Eastern Time and we probably headed over the shuttle landing facility about 8AM. One other thing that does stand out to me, and I wrote it in my book, is the fact that it was so foggy out that morning and it made me wonder whether or not the fog was gonna clear up enough to allow a shuttle landing on the first opportunity. Typically there are a couple of orbits that the shuttle mechanics line up in a way that make it able to come back to Florida. The first opportunity, it was uncertain whether the fog was gonna clear up enough to let them try for the first orbit, but it did. We showed up an hour beforehand and waited for the shuttle to come back, just as we had many other times. Reporter were standing around on this grassy area that used to be out there, the landing site's changed a little bit since Columbia. They've made a permanent viewing stand and sort of a more elaborate air traffic control tower than what they used to have, but reporters just stood around in small groups making conversation. On the morning of the landing, it was like any other, we were waiting for the shuttle to come home and obviously that didn't happen. Tragically enough.

Following the moment where you knew something went wrong, what did you do for the rest of the day? Did they take you somewhere else? Were you trying to get information?

Again, it was precisely the same procedure that it had always been, and keep in mind, even though there had been an accident, the accident didn't happen at the Kennedy Space Center, it happened hundreds of mile west of the Kennedy Space Center in Texas and Louisiana. Everybody immediately went out and boarded the buses to go back to the press site, the way we always did after a successful landing. And after it became clear that the shuttle wasn't coming to land at the Kennedy Space Center we boarded the buses, went back to the Kennedy Space Center press site, where all of our permanent facilities and offices were located. We had a double-wide trailer at the time I worked for the Orland Sentinel and I began typing stories for extra editions and the next day's newspaper and barely budged from my seat from about 10AM that morning until about midnight that night. It was a day I will never forget.

I'm writing a lot about NASA's crisis plan, about how they had a plan in place, was it obvious to reporter that they had a plan? Did it seem like they were well prepared?

It did and I guess one thing is should, in that context talk about, even though the ramp up to the accident was business as usual, when it became clear there was an accident NASA did have a crisis communication plan, in fact they have an overall contingency plan that goes above public affairs and covers other parts of the agency and how they respond to a disaster or accident. I remember there was a press availability very briefly with the NASA Administrator who then was Sean O'Keefe that happened somewhere between an hour and two hours after the accident in which he came and made a brief statement. Then not too much longer after that, I think I have the timing on this right, the Shuttle Program Manager Ron Dittemore had a press conference from the Johnson Space Center in Houston and reporters asked questions there. Reporters who were around for the Challenger accident, and I was not as a journalist covering the space program at that time in 1986 when the Challenger accident occurred, colleagues of mine were reporters back then and were covering the space program and without a question everyone of them would say that NASA handled the aftermath of the Columbia accident far, far better than they handled the aftermath of the Challenger accident. Some of the things that they did that made their handling so much better was the fact that they made information available in a more timely fashion and they made more of it available. There were daily press conferences in the aftermath of the Columbia accident. There was constant information releases. There was a huge staff of public affairs officers who were available to help answer media questions. The day after the accident occurred all of the people who cover the shuttle program essentially relocated to the Johnson Space Center in Houston, that was where the accident board was set up, the Columbia Accident Investigation Board had their headquarters, and it was also the home of the Johnson Space Center which of course is where the space program office, where the shuttle program manager works and its where the mission control center is where they were in charge of the re-entry. It's where the mission management team was that oversaw the conduct of the mission and that sort of thing. So that was sort of ground zero in the weeks and months after the accident. I thought from a reporters standpoint, and again I'm not saying this because I now work for NASA, I thought all things considered they did an excellent job in trying to make things available in a timely fashion. Again if you talk to people who covered both accidents I have never heard anybody say anything but that the handling of the Columbia accident by public affairs was dramatically better than handling of the Challenger accident when information was very difficult to come by.

What was the relationship like between the media and NASA? Was there ever a point where the relationship was difficult or strained? Were there occasions where you couldn't get information when you needed it?

NASA is sort of interesting in that it has sort of a regular press corps that follows it. There are maybe one to two dozen reporters who essentially are specialty or niche reporters covering NASA and the space program. Some of them are even more niche than that and simply cover the space shuttle program. That's sort of important because NASA has ongoing relationships with these people and NASA knows them and they know the agency and there are people that they know and interact with on a regular basis. I think familiarity helps with times like, in crisis communication situations because you know who you're dealing with and you know what the expectations are and you know what that person's looking for and you know where they're coming from. That's not to say that there weren't times when there were tense moments with some media representatives, some reporters and NASA. Most of the people however, where



there were tensions were people who sort of parachuted in, who covered other beats and general assignment reporters from other newspapers that didn't usually cover the shuttle program who would drop in and be frustrated by their ability to break stories and get inside information, that sort of thing. So were there tensions sometimes that would erupt between NASA public affairs and reporters? Yes, there were but overall I don't think it was that common and it was uncommon between NASA public affairs and this core group of beat reporters who routinely covered the agency.

## **VITA**

Emily Ann Schult is a native of Irmo, South Carolina. She graduated with a Bachelor of Arts in mass communication from Louisiana State University in 2006. Emily knew from an early age that she wanted to pursue a post-graduate degree. She decided to stay at LSU and accept a position with the Manship School of Mass Communication's graduate program.

Throughout the program Emily's research interests included public relations strategies and tactics, the crisis communication efforts of public and private organizations and media law. Emily became interested in NASA's crisis communication efforts following disasters after reading a series of articles on the subject in a public relations class. Presented with the opportunity to interview former NASA Administrator Sean O'Keefe, she believed that NASA presented a great opportunity for further research.

Following graduation Emily hopes to gain a job in public relations, public affairs or event planning. She hopes to pursue her doctorate degree many, many years from now.