Western Oceanography Institute

It was already 72 degrees when Astrid Young pulled into the parking lot at the Western Oceanography Institute (WOI). The radio announcer was reminding listeners to leave out extra water for their pets because the temperature was going to be in the high 90s for the third straight day. Young made a mental note to call her husband, Jon, when she got to her office and make sure that he left plenty of water outside for their cat, Figaro. Young was three-quarters of the way through the Microsoft NT conversion project. Yesterday had been a disaster, and she was determined to get back on top of things.

ASTRID YOUNG

Astrid Young was a 27-year-old graduate of Western State University (WSU) with a B.S. degree in management information systems. After graduation she worked for five years at Evergreen Systems in Seattle, Washington. While at WSU she worked part time for an oceanography professor, Ahmet Green, creating a customized database for a research project he was conducting. Green was recently appointed director of WOI, and Young was confident that this prior experience was instrumental in her getting the job as information services (IS) director at the Institute. Although she took a significant pay cut, she jumped at the opportunity to return to her alma mater. Her job at Evergreen Systems had been very demanding. The long hours and extensive traveling had created tension in her marriage. She was looking forward to a normal job with reasonable hours. Besides, Jon would be busy pursuing his MBA at Western State. While at Evergreen, Young worked on Y2000 projects and installed NT servers. She was confident that she had the requisite technical expertise to excel at her new job.

Western Oceanography Institute was an independently funded research facility aligned with Western State University. Approximately 60 full- and part-time staff worked at the Institute. They worked on research grants funded by the National Science Foundation (NSF) and the United Nations (UN), as well as research financed by private industry. There were typically 7 to 8 major research projects under way at any one time as well as 20 to 25 smaller projects. One-third of the Institute's scientists had part-time teaching assignments at WSU and used the Institute to conduct their own basic research.

FIRST FOUR MONTHS AT WOI

Young worked at the Institute for four months prior to initiating the NT conversion project. She made a point of introducing herself to the various groups of people upon her arrival at the Institute. Still, her contact with the staff had been limited. She spent most of her time becoming familiar with WOI's information system, training her staff, responding to unexpected problems, and planning the conversion project. Young suffered from food allergies and refrained from informal staff lunches at nearby restaurants. She stopped regularly attending the biweekly staff meetings in order to devote more time to her work. She now only attended the meetings when there was a specific agenda item regarding her operation.

Last month the system was corrupted by a virus introduced over the Internet. She devoted an entire weekend to restoring the system to operation. A recurring headache was one of the servers code-named "Poncho" that would occasionally shut down for no apparent reason. Instead of replacing it, she decided to nurse Poncho along until it was replaced by the new NT system. Her work was frequently interrupted by frantic calls from staff researchers who needed immediate help on a variety of computer-related problems. She was shocked at how computer illiterate some of the researchers were and how she had to guide them

through some of the basics of e-mail management and database configuration. She did find time to help Assistant Professor Amanda Johnson on a project. Johnson was the only researcher to respond to Young's e-mail announcing that the IS staff was available to help on projects. Young created a virtual project office on the Internet so that Johnson could collaborate with colleagues from institutes in Italy and Thailand on a UN research grant. She looked forward to the day when she could spend more time on fun projects like that.

Young had a part-time team of five student assistants from the computer science department. At first she was not sure how freely she could delegate work to the students, and she closely supervised their work. She quickly realized that they were all very bright, competent workers who were anxious to leverage this work experience into a lucrative career upon graduation. She admitted that she sometimes had a hard time relating to students who were preoccupied with fraternity bashes and X-games. She lost her temper only once, and that was at Samantha Eggert for failing to set up an adequate virus screening system that would have prevented the Internet corruption that occurred. She kept a close eye on Eggert's work after that, but in time, Eggert proved her worth. Young saw a lot of herself in Eggert's work habits.

THE MICROSOFT NT CONVERSION PROJECT

Young laid the groundwork for the NT conversion project in her recruitment interview with the director by arguing that conversion was a critical skill she would bring to the position. Once hired she was able to sell the director and his immediate staff on the project, but not without some resistance. Some associate directors questioned whether it was necessary to go through another conversion so soon after the Windows 95 conversion 16 months ago. Some of the researchers lobbied that the money would be better spent on installing a centralized air-conditioning system at WOI. Ultimately, the director signed off on the project after Young assured him that the conversion would be relatively painless and the Institute would then have a state-of-the-art information system.

The conversion was scheduled to take eight weeks to complete and consisted of four major phases: server setup, network installation, data migration, and workstation conversion. The project would be completed during the summer so that the student assistants could work full time on the project. Young and her student team would first need to purchase and set up seven new NT servers. They would then create a new local area network (LAN). Next they would migrate data to the new Oracle NT database. Finally, they would convert the existing 65 client computers into NT workstations capable of functioning on the new system. Young had been actively involved in four similar conversions when working at Evergreen Systems and was confident that she and her team could complete the project with a minimum of technical problems. She also believed that this conversion would not be traumatic to the staff at the Institute because the NT interface was very similar to the Windows 95 interface.

Young knew that in order for the project to be considered successful, there needed to be minimum disruption of daily staff functions. She held a staff briefing meeting to outline the scope of the project and the impact it would have on the Institute's operations. She was disappointed by the light attendance at the meeting. One problem was the irregular hours staff worked at WOI. Several of the researchers were night owls who preferred to work late into the night. Other staff

traveled frequently. She ended up holding two other briefing meetings, including one in the evening. Still the attendance was less than desired.

The staff's major concerns were the amount of downtime that would occur and whether the software and databases they were currently using would work on the new system. Young assured them that most of the downtime would occur on the weekends and would be posted well in advance. The only disruption would be two hours necessary to convert their existing computer into a workstation. Young invested extra energy in researching the compatibility issue and sent an e-mail to everyone listing the software that was known to not work in the NT system. The only software problems involved specially written DOS v2.1 or older programs that would not function in the new NT operating environment. In one case, she assigned a student to rewrite and enhance the present program for a researcher. In the other case, she was able to persuade the staff member to use a newer, better program.

Young sent a second e-mail asking staff members to clean up their hard drives and get rid of old, obsolete files because the new NT software would take up considerably more space than the Windows 95 operating system. In some cases, she replaced existing hard drives with bigger drives so that this would not be a problem. She circulated a workstation conversion schedule by e-mail so that staff could pick a preferred time for when their computer would be down and when her assistants could upgrade the computer into a workstation. Seventy percent of the staff responded to the e-mail request, and she and her staff contacted the remaining staff by telephone to schedule the conversion.

The first six weeks of the project went relatively smoothly. The NT servers arrived on time and were installed and configured on schedule. The completion of the network was delayed three days when the fire marshal showed up earlier than planned to inspect the electrical wiring. Young had never met the marshal before and was surprised at how nit-picking he was. They failed the inspection, and it took three days to reschedule and pass inspection. Word about failing the fire inspection circulated the hallways at the Institute. One joker put a Smokey the Bear sign on the IS office door. Young later found out that as a result of a recent fire in town, the fire marshals had been instructed to be extra vigilant in their inspections.

Data migration to the new Oracle database took a little longer than planned because the new version was not as compatible with the old version as advertised. Still, this only added three days to the project. The project was entering the fourth and final phase—conversion of client computers into NT workstations. This phase involved her staff deleting the old operating system and installing new operating software in each computer at the Institute. Young had scheduled two hours per machine and had organized a daily workload of 10 computers so that adequate backup could be made just in case something went wrong.

Young chose to convert the director's office first and told Green that everything was going according to plan. Soon the project began to experience nagging problems. First, some of the staff forgot when they were scheduled to be converted. The team had to wait for them to abandon what they were doing so they could convert the computer. Second, the drivers on some of the computers were not compatible, and the team had to devote extra time downloading new drivers off the Internet. Third, a few of the staff failed to create adequate hard drive space to accommodate the new NT software. In most cases, the team worked with the staff member to delete or compress unnecessary files. One time the staff member could not be found, and Young had to decide which files to delete. This wasn't a problem

since the hard drive contained computer games and ancient Word Perfect files. To compound matters, midway through the third day, one of the student assistants, Steve Stills, was diagnosed with a moderate case of carpal tunnel and was told to take two weeks off from computer work.

After three days only 22 computers had been converted to NT stations. Young ended the day by sending an e-mail to the remaining users apologizing for the delays and posting a revised schedule for their system configuration.

THE CALL

Young and her staff were working diligently on converting computers into NT workstations when she received an urgent call from the director's secretary requesting that she drop everything and come downstairs to the staff meeting. The secretary's voice appeared tense, and Young wondered what was up. As she gathered her things, the student assistant, Eggert, cleared her throat and confided that there may be problems with some of the Institute's Web sites. She discovered yesterday that some of the links in the Web pages created using Netscape weren't working in the Microsoft environment. Young demanded to know why she wasn't told about this sooner. Eggerts confessed that she thought she had fixed the problem last night. Young told her that they would talk about this when she got back and left.

Young entered the meeting room and immediately recognized that there were more than the usual faces in attendance. The director welcomed her by saying, "We're glad you could find the time to visit with us. My staff meeting has just erupted into a series of complaints about your NT conversion project. As it turns out Dr. Phillips over here can't access his documents because his Word Perfect file mysteriously disappeared. Dr. Simon's geothermal assessment program, which he has used for the past seven years, doesn't seem to work anymore. Now it appears that the Web site we use to coordinate our research with the Oslo Institute is a mess. Everyone is complaining about how the revised installation schedule is going to disrupt work. I want to know why I wasn't informed about these problems. These guys want to lynch me for approving your project!"

1. How would you respond to the director?
2. What mistakes did Young make that contributed to the problems at the end of the case?
3. How could she have managed the conversion project better?