

**Case****Ajax Project**

Tran was taking his dog Callie on her evening walk as the sun began to set over the coastal range. He looked forward to this time of the day. It was an opportunity to enjoy some peace and quiet. It was also a time to review events on the Ajax project and plot his next moves.

Ajax is the code name given by CEBEX for a high-tech security system project funded by the U.S. Department of Defense (DOD). Tran is the project manager and his core team consisted of 30 full-time hardware and software engineers.

Tran and his family fled Cambodia when he was four years old. He joined the U.S. Air Force when he was 18 and used the education stipend to attend Washington State University. He joined CEBEX upon graduating with a dual degree in mechanical and electrical engineering. After working on a variety of projects for 10 years Tran decided he wanted to enter management. He went to night school at the University of Washington to earn an MBA.

Tran became a project manager for the money. He also thought he was good at it. He enjoyed working with people and making the right things happen. This was his fifth project and up to now he was batting .500, with half of his projects coming ahead of schedule. Tran was proud that he could now afford to send his oldest child to Stanford University.

Ajax was one of many defense projects the CEBEX Corporation had under contract with DOD. CEBEX is a huge defense company with annual sales in excess of \$30 billion and more than 120,000 employees worldwide. CEBEX's five major business areas are Aeronautics, Electronic Systems, Information & Technology Services, Integrated Systems & Solutions, and Space Systems. Ajax was one of several new projects sponsored by the Integrated Systems & Solutions division aimed at the homeland security business. CEBEX was confident that it could leverage its technical expertise and political connections to become a major player in this growing market. Ajax was one of several projects directed at designing, developing, and installing a security system at an important government installation.

Tran had two major concerns when he started the Ajax project. The first was the technical risks inherent in the project. In theory the design principles made sense and the project used proven technology. Still the technology had never been applied in the field in this matter. From past experience, Tran knew there was a big difference between the laboratory and the real world. He also knew that integrating the audio, optical, tactile, and laser subsystems would test the patience and ingenuity of his team.

The second concern involved his team. The team was pretty much split down the middle between hardware and electrical engineers. Not only did these engineers have different skill sets and tend to look at problems differently, but generational differences between the two groups were evident as well. The hardware engineers were almost all former military, family men with conservative attire and beliefs. The electrical engineers were a much motlier crew. They tended to be young, single, and at times very cocky. While the hardware engineers talked about the Seattle Mariners, raising teenagers, and going to Palm Desert to play golf, the

software engineers talked about Vapor, the latest concert at the Gorge amphitheater, and going mountain biking in Peru.

To make matters worse, tension between these two groups within CEBEX festered around salary issues. Electrical engineers were at a premium, and the hardware engineers resented the new hires' salary packages, which were comparable to what they were earning after 20 years of working for CEBEX. Still the real money was to be made from the incentives associated with project performance. These were all contingent on meeting project milestones and the final completion date.

Before actual work started on the project, Tran arranged a two-day team-building retreat at a lodge on the Olympic peninsula for his entire team as well as key staff from the government installation. He used this time to go over the major objectives of the project and unveil the basic project plan. An internal consultant facilitated several team-building activities that made light of cross-generational issues. Tran felt a real sense of camaraderie within the team.

The good feelings generated from the retreat carried over to the beginning of the project. The entire team bought into the mission of the project and technical challenges it represented. Hardware and electrical engineers worked side by side to solve problems and build subsystems.

The project plan was built around a series of five tests, with each test being a more rigorous verification of total system performance. Passing each test represented a key milestone for the project. The team was excited about conducting the first Alpha test one week early—only to be disappointed by a series of minor technical glitches that took two weeks of problem solving to resolve. The team worked extra hard to make up for the lost time. Tran was proud of the team and how hard members had worked together.

The Alpha II test was conducted on schedule, but once again the system failed to perform. This time three weeks of debugging was needed before the team received the green light to move to the next phase of the project. By this time, team goodwill had been tested, and emotions were a bit frayed. A cloud of disappointment descended over the team as hopes of bonuses disappeared with the project falling further behind schedule. This was augmented by cynics who felt that the original schedule was unfair and the deadlines were impossible to begin with.

Tran responded by starting each day with a status meeting where the team reviewed what they accomplished the previous day and set new objectives for that day. He believed these meetings were helpful in establishing positive momentum and reinforcing a team identity among the engineers. He also went out of his way to spend more time with the "troops," helping them solve problems, offering encouragement, and a sincere pat on the back when one was deserved.

He was cautiously optimistic when the time came to conduct the Alpha III test. It was the end of the day when the switch was turned on, but nothing happened. Within minutes the entire team heard the news. Screams could be heard down the hallway. Perhaps the most telling moment was when Tran looked down at the company's parking lot and saw most of his project team walking by themselves to their cars.

As Callie chased some wild bunnies, Tran pondered what he should do next.

1. How effective has Tran been as a project manager? Explain.
2. What problem(s) does Tran face?
3. How would you go about solving them? Why?