

# Case Study

## Chase Beeman

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BY JUNYAN HAO & CHAD BLESSINGER

As he walked from the parking garage Monday afternoon, Chase Beeman was apprehensive about his meeting with Professor Kramer. He has tried his hardest to keep the whole team together and on track, but he knew the boss was concerned. Professor Kramer could be a very demanding person at times. He was such an accomplished person himself, holding everyone he worked with to extremely high standards. Chase respected Professor Kramer very much and did not want to let him down. From the beginning, Chase has been enthusiastic about this project but has always been a little concerned about his knowledge of the content. Linear algebra seemed way over his head. “Ok, here I go. Take a deep breath.” He knocks on Professor Kramer’s door.

“Come on in and close the door. Chase, we’ve got to do something soon. It is March already and our prototype is nowhere near ready to test. We have plenty of literature review backing up our grant proposal, but without a product to show I don’t know that we’ll be able to compete for the funding we need to keep this project going.”

“Sorry about this, Professor. Actually, I’ve been putting a lot of time into this project. The underlying framework of the software seems to be well on its way, but both the web development portion and the content are behind.”

“I agree. We really need a solution if we’re going to be ready for May. What I want you to do is to take this next couple of days then meet me on Wednesday with a few ideas on how we can expedite things. I’m really depending on you here and I’m sure you won’t let me down. See you Wednesday.”

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### PROJECT

For some time Professor Kramer wanted to find a way to distinguish his name in the Computer Graphics Technology (CGT) Department. He had been promoted to Associate Professor about three years earlier and still felt as though he hadn’t shown his potential in the department. He was a primary asset in the area of multimedia development. This was in part due to a lack of faculty other than him with strong programming experience.

Recently, Professor Kramer had noticed that many other universities were pushing to develop generic distance training programs. He decided that this was his chance. He started putting together ideas about creating “intelligent” computer-based training (CBT) software that could work generically with varying content.

When he began teaching a graduate level course in artificial intelligence (AI) in computer graphics, he saw an opportunity to begin an ambitious endeavor. His generic intelligent CBT tool was going to become a reality. This class was perfect as a resource for both research and man power. After the first semester of the class where he had his students complete extensive literature review about instructional software tools, it was time to begin. The following semester he was going to attempt finishing a prototype before a spring grant deadline using every resource at his disposal. He had an excellent content idea for the first run of the project too. The linear algebra class he took for his

doctorial studies last year would be perfect. There were numerous faculty members in the Math department who influenced the grant committee and could make this project happen. Using math-based content would hopefully get their attention. All he needed was a successful prototype.

As a professor, he had the ability to draw help from many different resources. He first planned to use the 571 class (the AI class mentioned before) as his primary development team. From this class he would get his instructional design group and his graphical designer. He also had a couple of specific undergraduates in mind that were experts in programming (Jewel & Dean) and digital video (Trey), and some students in his undergraduate classes could also be used for some of the “grunt work”. Because he knew he would be kept very busy in teaching and researching, he approached Chase Beeman, a student from the AI class the previous semester to act as his project manager and to aid in an evaluation of the project before his May 1 grant deadline. He was very concerned that if this deadline were not met the project would fall apart due to a lack of departmental support and funding, and student excitement at this new development idea would be running off.

## **FIRST TEAM MEETING**

Professor Kramer had decided to use time out of his AI class for team meetings. Before the first full team meeting, everyone’s role in the project had been determined. This first meeting was held on the second Monday night of the semester. Everyone but the undergraduates working for Trey was in attendance. There was a stir of excitement in the room.

Professor Kramer began the first meeting by introducing Chase to the rest of the team and explained how all communication should go through him when possible. He then went into a detailed description of his expectations for the generic intelligent computer-based training tool. As far as he was concerned, the CBT must:

- Be able to learn from a user’s responses how to better present information in the future.
- Have the ability to demonstrate material to different learner types. For example, visual, auditory, tactile, etc. The specific definition of learner types is to be determined by the ID team.
- Have a user customizable interface.
- Be able to link and update from an online resource center using VB.NET.
- Work cross platform, with varying bandwidths, and on varying quality machines.

Any other ideas were negotiable, and could be worked out later. The rest of the meeting was spent brainstorming and discussing the potential of the project. Most of the team members left excited about their roles in the development of this generic CBI. They felt that if this project is successful, it would be an excellent resume line. The one group that acted differently included students from the web development class. Chase noticed this by the looks on their faces and by how little they participated during the brainstorming session. When he asked why, many of them responded with statements like the following: “We’re being asked to do too much in too little time. None of us have programmed using VB.NET before. This whole thing seems overwhelming. We just want to get this thing over with and graduate.” Chase tried to encourage them and suggested a few good resources for them to consult to make their burden easier, but few of them became more optimistic.

## NEXT 6 WEEKS

Within a week, Chase established communication links for the team in a number of ways. First the entire team was to meet every Monday night for a review of the projects progress. Also, Chase regularly checked in with Jewel and Dean, the programmers, and Trey, the video developer, in the labs where they worked. He also kept in contact with all team members through an email account set up solely for this project. Finally, a freeware collaboration software package called 'VirtualTeam' (VT) was used for file management and document control (see Figure 1). VT allowed for everyone on the team to have access to instances of any file or document they needed at any time without jeopardizing the integrity of the project. All master files could still be controlled by original owners. Chase had also met with Professor Kramer and established a timeline for the project. He thought he had everything figured out, how could anything go wrong?

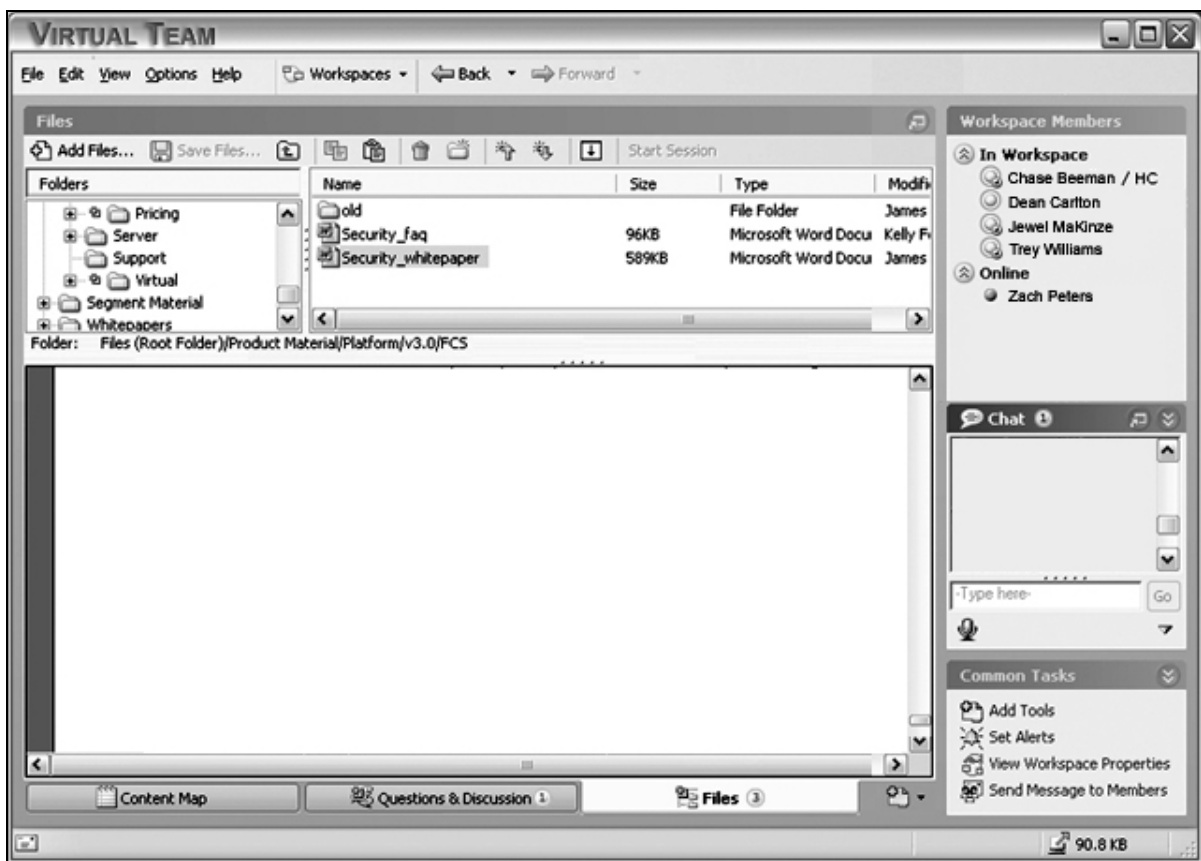


FIGURE 1 Screenshot from Virtual Team Collaboration Software

As the next few weeks went by the project seemed to be moving slower and slower. At first, Chase thought that things would pick up after everyone got in a better groove. This did not seem to be happening. After three weeks, half of the team had still not signed onto and started using VT. Emails stopped coming as regularly as they had before. Due to Professor Kramer's schedule, the ID team was having a difficult time meeting with him to obtain subject matter. The web development group still had not begun with the web portion of the generic intelligent CBT tool. Then finally, attendance at meetings was becoming ever thinner. The only things that seemed to be going completely as planned was that Zach had finished a couple of effective skins and Jewel & Dean had completed a skeleton of the software. The following three weeks did not go much better.

Chase was certainly not looking forward to the following Monday, when he was going to be meeting with Professor Kramer about schedule problems.

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## WHAT NEXT?

As he headed back to his car, Chase pondered to himself. "Wow, how did I get myself into this mess? Sure, this project seemed really big, but there were so many people working on it. I don't know how I'm going to figure out how to clean things up in two days. This could become a black mark on me for the whole department to see. What could I have done differently from the start?"

When Chase got home, he decided to go back to the beginning and try to see where things began to go wrong. He started by making a chart of everyone involved in the project. The team was really big so he didn't want to leave anyone out (see Table 1). He then went on to list a few observations he made about the team from the chart.

- The team is made up of approximately 30 people.
- The only member of the team with a formal understanding of the content of this project is Professor Kramer.
- The entire team is made up of people from the Computer Graphics Technology department.
- Members of the team vary in skills from programming to artist.
- Other than Professor Kramer, the rest of the team only has a one semester commitment to this project.

<p>Professor Kramer (SME, Client)</p>	<p>Professor of Computer Graphics Technology sponsoring the project.</p>
<p>Chase Beeman (Myself)</p>	<p>I am a graduate student doing an independent study as the Project Manager of Professor Kramer’s project. My main purpose on the project is to create pathways for and moderate communication between different portions of the team. I establish and keep track of progress along a timeline, help manage assets, and keep Professor Kramer up to date on any deviances from the original established plan and schedule. I also help test the validity of the software during and after its development.</p>
<p>571 AI Class (Main ID Team)</p>	<p>This is a class of graduate students in computer graphics who have taken on many of the primary roles on the team. [Design Team]</p> <ul style="list-style-type: none"> <li>• <u>Jacob</u> acted as the primary ID with a team of about 4 other graduate students working with him. The ID team, although enthusiastic, had very little real experience. They still depended strongly on text, using Dick &amp; Carey loyally.</li> <li>• <u>Zach</u> was the main graphic artist on the team. He was exceptional at working in various graphics software tools, but not with other people. He didn’t talk much during meetings. He was charged with creating the “skins” (visual appearance) for the interface.</li> <li>• <u>Leah</u> was the usability specialist on the team. Her primary purpose was to test the ease which the software could be used. She became the expert on our target audience. She was expected to plan the formative evaluation of the tool before it was implemented.</li> </ul>
<p>434 Class (Web Development)</p>	<p>This was a group of about 15 undergraduate students who were taking a required web development class. Most of the students in this class were in their final semester before graduation. For the main project in this course they were required as a group to develop all of the web resources interacting with the software using VB.NET. Most of them were not familiar with VB.NET at the beginning of the project, only older forms of VB scripting.</p>
<p>Jewel &amp; Dean (Programming)</p>	<p>These two were undergraduate students in CGT brought into the project because of their expertise in programming. They were friends and had worked on projects together before with a great deal of success. Both had expressed interest in graduate school and really wanted to improve their resume by working on this project. They were in charge of all of the programming for the software itself.</p>
<p>Trey (Video Editing &amp; Special Effects)</p>	<p>He was also an undergraduate student in CGT. Trey was in charge of all of the video work to be done on the project. He had shown great talent in digital video editing on past work, particularly when working with 3D virtual environments. Something that Professor Kramer really wanted introduced into his project. He was to oversee a group of other undergraduate students working on all of the small pieces of video content later to be combined.</p>

**TABLE 1**

In the next two days, Chase needs to formulate a plan to present to Professor Kramer for meeting the May 1 grant deadline. He has never failed to meet a project deadline before. On the other hand he has never worked with a team quite like this before. Chase keeps thinking, “This would all be so much easier if I knew linear algebra. It is just so hard to schedule enough of Professor Kramer’s time for the project. I don’t want him to think I’m useless.”

### **PRELIMINARY ANALYSIS QUESTIONS**

1. Evaluate Chase’s performance in managing this project. What might he have done differently from the beginning?
2. What weaknesses can you identify within the ID team in this project from the beginning?
3. How important is the availability of Professor Kramer, the SME, to the success of this project?
4. If you were Chase, what would you tell Professor Kramer when you return to meet him on Wednesday?

### **IMPLICATIONS FOR ID PRACTICE**

1. Formative evaluation is the key to validating this CBT tool. How would you suggest that evaluation be done on a CBT tool that is designed for generic content?
2. How does an understanding of expert/novice ID behavior interplay with the issues of this case?

## Opening Activity

(Role Playing) → Mock meeting on Tuesday night

Chase has sent out an email calling for an emergency team meeting to brainstorm on what issues with the project are and how the team can resolve them. He has asked that everyone invited (specific stakeholder or representatives of) come to the meeting with a list of what they think (from the point of view of the stakeholders) the top 2 or 3 reasons are for the project being behind schedule. He hopes that this meeting will allow everyone to speak their piece, and give him ideas for his meeting with Professor Kramer the following afternoon.

Email:

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Hello Everyone,

As you all well know, we are six weeks into this project and are beginning to fall behind schedule. This afternoon I met with Professor Kramer where he expressed a need for us to get back on track. Before I decide on the best plan of action for us to take, I would like to hear from representatives of the whole team. I ask all of you to come to an emergency meeting tomorrow night (Tuesday @ 7pm) with a list of 2 or 3 reasons why you think we are falling behind. Be prepared to discuss your thoughts. I greatly appreciate everyone's work up until now, and I am sure we can solve any issues identified.

See you tomorrow,  
Chase Beeman  
Project Manager

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Representatives:

ID [Jacob] → Anne  
Graphic Design & Evaluation [Zach & Leah] → Monica  
Web Development Team → Pat  
Programming [Jewel & Dean] → Jason  
Video & Effects [Trey] → Hans