I had a great time in Dalian. I enjoyed many new experiences and accomplished a lot. There were some challenges and problems, but we seemed to overcome them all, and in the end it was a very positive experience.

My activities in Dalian were essentially setting up the iLab, teaching two courses, and exploring the campus and city. All three were valuable experiences and provided a nice variety to my six weeks there.

iLabs

Setting up the iLab project in Dalian was certainly the most challenging of my work in China. This is noteworthy, since we initially thought it might be the easiest, but soon realized that it involved many things which were not under the team's control. Of course, this also made it quite interesting at times, and especially satisfying when we finally overcame all of the challenges.

The initial challenges stemmed from communicating with the interested department's teachers and administrators, trying to make sure that we all understood exactly what we were trying to do and how it would be used. Obviously, the language barrier made this even more difficult than it would normally be. Confusions arose again and again throughout the project, but we were at least able to get the university to purchase a server for us within the first week.

Once this server arrived, however, a plethora of other problems arose, and it was on solving these problems that I spent a lot of time. They were mainly firewall-related, since the network at the university was quite restrictive. I got around this to some extent by technical means, but eventually the university gave our server special firewall privileges, by opening several key ports we needed for communicating with the other iLab servers. This fixed pretty much everything, but it was a long time in coming.

In addition, there were some bugs and inconsistencies with the iLab itself. This was mainly because during the summer, the 6.012 Microelectronics iLab we were using is tested and modified. This ended up being a kind of nice opportunity, however, since I got to fix some of the microelectronics iLab bugs myself, and now my code is incorporated into that lab. It also meant that I was programming in Java at the same time I was teaching it, which connected the iLabs to the teaching in a similar way that using the iLab in our microelectronics class did.
Teaching

I've ended up teaching once or twice, never quite intentionally, and I've always very much enjoyed it and, I think, done a good job. Despite the language barrier, teaching in Dalian was even more fun than my previous experiences.

Firstly, James and I taught Java. I had just finished 6.170 back at MIT, in which we had been using Java 1.5, so I suggested we teach Java 1.5 instead of the more pervasive 1.4.2. I think this was a good decision overall, since 1.5 has many of the aspects of a very modern language such as Python, and demonstrates certain theoretical computer science concepts much more elegantly than its predecessors.

My other major contribution to the class, in addition to adapting all of the labs from the OpenCourseWare Java course we were using, was the creation of a very simple but very powerful framework in which the students could write their first graphical program. I ended up making this because we had hoped to be able to teach them Swing, Java's graphical API, but had slowly realized that we would not have time to get to it. So I stayed up all night before the last day of class writing what I called Things, which was basically a very object-oriented approach that allowed them to apply everything they had learned so far to making graphical entities interact on the screen. I also wrote up a lab to introduce them to its uses, ending with an open-ended question asking them to experiment and make something cool. They ended up making some very cool things, and I was really impressed and happy that my work paid off.

Following is a screenshot of the Things I made, but some of the students made even more advanced ones. Keep in mind that all of the things are constantly spinning and moving and that it is interactive:
Dan Wheeler, a CETI participant, even ended up re-using Things at a high school elsewhere in China. For more info, see http://mit.edu/harold/Public/things

**Personal**

China was also very interesting beyond the lab and classroom. I spent most of my time at the foreign students' dormitory where I lived, which was in itself interesting, full mostly of very intelligent and multilingual Africans, Indians, Koreans, and many other nationalities. I also played ping pong with James and Elysa, and for a while we were reasonably good at it. We even decided that I should have a ping pong star nickname, *shayu*, which means shark:

I also spent a lot of time exploring Dalian by bus and on foot. I slowly realized how huge a city it is, and I know I never even began to see a fraction of it. Still, I got a feel for the various areas, the beaches, the shopping centers, the business parks, the universities, and the parks and mountains. I loved watching hundreds of elderly people doing fan dances in the parks at night; it was enchanting. I also loved climbing a hill/mountain very near to my dorm. It only took about twenty minutes from leaving my room until I was at its very top, and yet from there I could see all
of Dalian, on a clear day, or more often just the nearer buildings and neighborhoods below, since it's a very foggy city. Either way, it was beautiful, and there were always people among the woods along the path, collecting berries in plastic bags. Also, it was one of the few places where strangers would talk to me, and wouldn't break into English when I didn't understand, since they didn't know any English. Here's a picture of reaching the mountain's bare top, in a deep fog:
There were also new buildings going up everywhere, and I liked to watch their progress. There were several new buildings right on campus, in fact. The above picture is of an old man sitting in front of one of these new buildings, which is almost finished but still under construction.

I had a wonderful time in China, and would suggest the experience to anyone. Teaching and meeting students and teachers and living among them is a great way to get a sense of the culture there, and it was a very satisfying way to spend the summer.