

THE LOOP: ENGINEERING PROJECT KEEPS ON GIVING

Dordt College senior engineering students complete a unique final design project

For Joshua Pearson, Nathan Gross, and Karl Mackatenas, last year's senior engineering project was both a learning experience and a service opportunity. Their supervising professor, Dr. Doug De Boer, gave them a list of project proposals, one of which was to design and install a Telecoil Transmitting System, otherwise known as a hearing loop, for Covenant Christian Reformed Church in Sioux Center. As a team, Pearson, Gross, and Mackatenas took on the challenge and created a project that continues to benefit churchgoers at Covenant.

Pearson describes the loop system as similar to a radio. The loop connects

to the sound system at the church and sends out an electromagnetic signal to hearing aids. Hearing aids equipped with a T-coil antenna pick up these signals by switching on a button on the aid itself. The system allows hearing aid users to hear only what comes through the church's microphone, minimizing the distracting background noises of people coughing or babies crying. De Boer explained that audiologists program the T-coil hearing aids to process the electromagnetic signal according to specific prescriptions for each person.

Shirley Matheis, a former costume designer in Dordt's theater department, is one of the Covenant members enjoying the benefits of the loop. After the Dordt engineers, with the assistance of church members, installed the system, Matheis says she was amazed and delighted at the sound that came right into her ears. She could even hear the pastor when he whispered. And she was finally able to hear others speak during an open-microphone time of sharing joys and concerns. Matheis is one of several Covenant members whose worship

SERVICE PROJECT

In reflecting on the project, De Boer says that more than many senior design projects he supervises, this loop system will have ongoing benefits. He also believes that it clearly demonstrates part of the Christian character of engineering at Dordt: engineering as service—not just developing the skill set needed to find a good job.

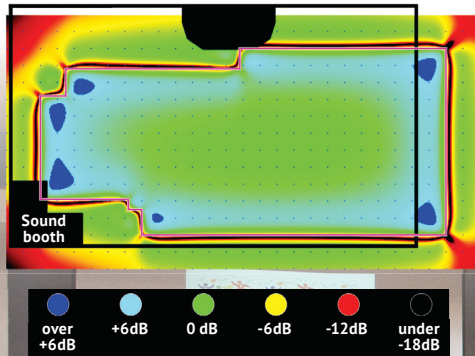
experience has greatly improved as a result of the engineering design project. They find that they are once again active participants in the service rather than merely observers.

Pearson found great reward in knowing that his efforts were helping others. He sees engineering as a unique way to meet others' needs and build God's kingdom. Professor De Boer says the hearing loop is one senior project he will remember for the rest of his life.

ELIZABETH RILEY ('15)

FIELD STRENGTH

This powerpoint screen from the students' presentation illustrates the strength of the signal at one meter.



The unique shape of the sanctuary at Covenant Christian Reformed church presented extra audio challenges.