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NEWS RELEASE

FOR IMMEDIATE RELEASE:

November 15, 2016

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Letourneau engineering students develop electronic cane

Students from the School of Engineering and Engineering Technology were assigned a class project to develop an electronic cane that could detect and alert the user of objects and drop offs without the cane touching the object or drop off at all. One group involved in the class project contacted Jarrett Gist, Orientation and Mobility Specialist at The Lighthouse, to get a better understanding of cane usage and functionality. Gist invited the group to The Lighthouse, giving them an introductory immersion training with the cane allowing them to understand first-hand how the cane is used for independent travel.

Dr. Byron Lichtenber, Program Coordinator, Master of Engineering Management at LeTourneau University stated *“The project itself started in the Business for Engineers course and is now part of the ENGR 2704: Project Management, Design and Entrepreneurship.”*

The “Eight Team” presented their idea concept has an add on to the current white cane design that blind and visually impaired users are familiar with today. Their idea was not to take away the core functionality of the white cane, but to enhance its long-range functionality.

“Our perspective changed after our visit with Jarrett.” stated Alex Smith, engineering student on the “Eight Team” project. *“We originally wanted to utilize ear buds as audible cues, but after going through the cane training with the blindfold we understood how important it is to be able to hear your surrounding while navigating with a cane.”*

Using jaw bone audible technology, the group was still able to utilize audible cues, but instead of placing ear buds in the ear, they place sensors on the jaw bone. This allows the user to hear sounds without blocking your ears. The concept transmits sounds through your bones directly to your inner ear – so you can still hear everything around you allowing for a safe navigation.

John Sloan, engineering student on the “Eight Team”, added *“We really hope this project keeps up and other classes are able to work on this concept, it really made us think and challenged us to understand not only the cane, but the user.”*