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FOR IMMEDIATE RELEASE

Student project enables hams to experiment in the 33 cm band

ARDC grant enables Bradley University students to develop an open-source, 915 MHz digital transceiver system.

June 15, 2022—DAEMod-915 is a Bradley University project whose goal is to design a digital transceiver system for experimentation in the under-utilized 33 cm band. The design includes support for multiple FSK/ASK modulation standards, and both hardware and software are open-source. The designers—Peter Handler, W9PLH; Connor Dickey, KD9LSV; and Philip Pierce, AC9YC—chose the 33 cm band for several reasons:

- It is one of the most under-utilized bands,
- It is available for use by non-licensed ISM users and licensed radio amateurs,
- It offers a good balance between cost, range, and available spectrum, and
- There is a lack of available open-source and open-hardware modules for implementing digital radio modes in this band.

Once complete, the DAEMod-915 project will reduce barriers to innovation in the 33 cm band. The project's detailed documentation will allow radio amateurs to experiment with digital protocols without spending a lot of money, and allow developers—be they solo developers, other educational institutions, or amateur radio clubs—to build upon the base hardware and software for their own unique applications. Documentation for the DAEMod-915 project is at https://github.com/DAEMod-915.

About the developers

Peter, Connor, and Philip are recent Bradley University graduates and are active Amateur Extra Class licensees. They serve as volunteer examiners and are active in a variety of amateur radio clubs. Peter has a strong interest in VHF/UHF digital modes as well as consumer electronics from the 1990s and 2000s, including portable media players, computers, and radio-operated devices. Connor enjoys contesting, portable operations, and administering amateur radio exams. Philip loves the outdoors and also enjoys mobile and portable operations. Dr. Prasad Shastry and Dr. Aleksander Malinowski are the project advisors. Dr. Shastry's expertise is in RF design and analysis and Dr. Malinowski's expertise is in embedded devices.

About Bradley University

Bradley University is a top-ranked private university in Peoria, Illinois, that offers nearly 6,000 undergraduate and graduate students opportunities and resources of a larger university and the personal attention and exceptional learning experience of a smaller university. Bradley offers more than 185 undergraduate and graduate academic programs in business, communications, education, engineering, fine arts, health sciences, liberal arts and sciences, and technology. These high-quality programs incorporate global and experiential learning opportunities, preparing graduates to succeed in a complex world. To learn more about Bradley University, please visit https://bradley.edu/.

About ARDC

Amateur Radio Digital Communications (ARDC) is a California-based foundation with roots in amateur radio and the technology of internet communication. The organization got its start by managing the AMPRnet address space, which is reserved for licensed amateur radio operators worldwide. Additionally, ARDC makes grants to projects and organizations that follow amateur radio’s practice and tradition of technical experimentation in both amateur radio and digital communication science. Such experimentation has led to advances that benefit the general public, including the mobile phone and wireless internet technology. ARDC envisions a world where all such technology is available through open source hardware and software, and where anyone

has the ability to innovate upon it. To learn more about ARDC, please visit https://www.ampr.org.

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