

KEEP 3 Case Study Sedgewall Communications Ltd.



SEDGEWALL

Company Information

The Sedgewall Communications Group are specialists in the design, manufacture, distribution and integration of electronic and communication systems, sub-systems and modules. The company has grown into a range of product areas and is a key supplier to the emergency services, MOD and other government departments and key telecommunications consumers\companies both in the UK and Overseas.

Strategic Requirement

We were looking to meet current technical challenges in digital audio technology and to enhance our capability in this area. The programme of work undertaken by the Associate was envisaged to complement the existing expertise within the company and thereby provide an effective means for meeting the current challenges but also help us to explore new market opportunities through the extension of our product range. Specific objectives were to provide audio signal processing expertise and embedded software development in order to produce a cost effective audio enhancement device for deployment within communications applications.

Solution

Through a Knowledge Partner's East of England (KEEP) partnership with the University of Hertfordshire's School of Electronic, Communications and Electrical Engineering, Sedgewall Communications accessed the University's expertise in audio signal processing and embedded software development.

Throughout the project the KEEP Associate, Dr Richard Edwards, developed the necessary electronic hardware changes and audio signal processing algorithms in real-time embedded software for deployment in the audio enhancement device.

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Benefits to Sedgewall Communications Ltd

Collaboration with the university on the KEEP project:

- Provided for signal processing and embedded programming expertise
- Generated possible ideas of future product direction
- Allowed for future collaboration on projects
- Enabled the business to complete the project within cost and time constraints

“The partnership with the university allowed us to complete the project on time and within budget. It gave us access to highly skilled persons who did provide us with the necessary expertise and helped us to explore new market opportunities. They have also shown their preparedness for future collaborations and support.”

Dr Abi Abiodun, Engineering Manager, Sedgewall Communications Ltd.

Benefits to the University

This KEEP programme and working closely with Sedgewall Communications Group Ltd provided a valuable opportunity for the staff involved to extend their knowledge and experience of certain industrial applications of audio signal processing techniques. This included gaining familiarity with the specific issues associated with the hardware realisation of such techniques for real-time operation.

Another positive outcome of the work has been the development of some interesting project ideas which are being considered for final-year students.

Moreover, the programme helped the staff further their skills and experience in the management of well structured and disciplined projects.

“As a result of this programme, a good working relationship has been established with the company,

which is expected to lead to further collaborative projects.”

Aladdin Ariyaeinia & George Pissanidis, Academic Supervisors, University of Hertfordshire

Benefits to the Associate

Richard has undertaken a proactive role in all aspects of signal processing software development in the company, which has given him the opportunity to establish and develop his skills relevant to a career in electronic engineering. Specifically:

- Working closely with hardware engineers to design and develop products from concept to prototype and into full products.
- Played an active role in other aspects of engineering work and responsibilities as required by the engineering manager.
- Improved in Software design as well as in enhanced embedded software development and skills.

“This project considerably improved my programming skills and gave me extensive access to advanced embedded development tools”

Dr Richard Edwards, KEEP 3 Associate, Sedgewall Communications Ltd.

Future Engagement

We have built up a good working relationship with the team involved in the project from the university. Our relationship with them has given us a better understanding of how the university can help us to develop future ideas and products while keeping costs to a desirable level.