SMARTSATCRC

Space-enabling Australia

NEWS

Welcome to the November issue of the SmartSat CRC Newsletter. Since publication of the last issue, the CRC team have been working hard toward submission of the Stage 2 application. We are pleased to announce that the Stage 2 application was successfully submitted to the Australian Government for the establishment of the SmartSatCRC.

If successful, the SmartSat CRC will be Australia's biggest ever nationally coordinated ecosystem of space research-industry collaboration. There is no doubt that this effort will lift the Australian space industry capability maturity and will make it a significant player the New Space economy!

A number of partners have joined the CRC since the Stage 1 application and the total number of participants now stands at 74. These partners have offered over $50M in cash contributions as well as $117M in-kind. We are still seeking $55M from the Australian Government.

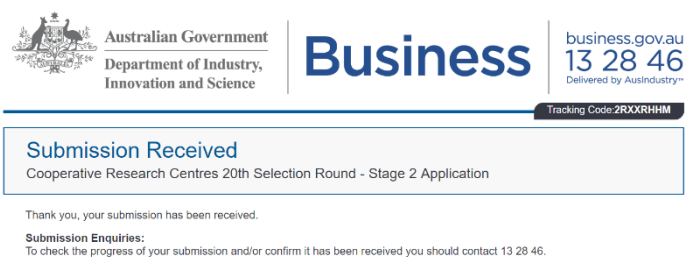
With some additional participants that did not quite make the deadline but will be included in time for the interview, and more partners wishing to join, we are on track to make this a total of ¼ Billion dollars CRC!

We would like to thank everyone who was involved in the writing and review of the application for their commitment to reaching this major milestone. The focus will now shift to preparing for the interview with the CRC Advisory Committee scheduled for 8 February 2019.

A special thank you to our Airbus colleagues who travelled from France to assist in the development and writing of the Stage 2 application.

Celebrations as we clicked 'submit'

Airbus colleagues at the conclusion of their visit to Adelaide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13 28 46
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Submission Received
Cooperative Research Centres 20th Selection Round - Stage 2 Application

Thank you, your submission has been received.

Submission Enquiries:
To check the progress of your submission and/or confirm it has been received you should contact 13 28 46.

Confirmation- "Submission Received!"

CAPITAL CITY WORKSHOPS

During November, workshops were held in both Canberra and Adelaide. The Canberra workshop, hosted by ANU provided an opportunity for government representatives, industry and research partners to come together and discuss the CRC themes, activities and outputs.

The first of the SmartSat CRC research workshops took place in Adelaide on the 22nd of November. 38 key researchers from universities around Australia came together to further refine the research program and assist in developing the Stage 2 application.

Each of the program leaders gave an engaging presentation and briefed attendees on the activities and outputs planned for their programs.

A very collegiate interaction has begun and we will continue to form strong relationships among the researchers who will work hand-in hand with our industry partners to deliver the research outputs of our CRC.

PROFILING OUR RESEARCHERS

Meet the Research Program Leaders

Associate Professor Gottfried Lechner (PROGRAM 1: Advanced Communications, Connectivity & IoT Technologies)

Gottfried is the current Director of the Institute for Telecommunications Research at UniSA. Gottfried has a strong publication record and has received research funding from a number of sources including significant funding from Defence. He is also co- inventor on 5 patents. His research expertise includes areas such as error correcting coding, signal processing, wireless communications, satellite communications, software defined radios and quantum key distribution.

His applied research expertise with industry partners will help to strengthen the link between academic research and end-user applications. His background in wireless communications in general and in satellite communications in particular will allow him to contribute to a wide range of projects and will put him in an ideal position for the coordination of this program.

Professor Russell Boyce (PROGRAM 2: Intelligent Satellite Systems, Sensors & Intelligence)

Russell has over 25 years' experience in the field of hypersonics. He has built a reputation for developing and delivering international

programs with significant scientific output, and built and trained talented multi-disciplinary teams and capabilities that now assist Australia's innovation sector, including the proposed CRC. Russell has published over 200 journal and conference publications, with a h-index of 18. He has over $50m research funding across his career and has led the development of the commercial spin-off from UNSW Canberra Space, Skykraft Pty Ltd.

Russell will provide the role of leading the development and implementation of the vision and strategy for a national R&D program for advanced satellite systems, sensors and intelligence, to be realised through his leadership of Research Program 2 of SmartSatCRC.

Professor Stuart Phinn (PROGRAM 3: Next Generation Earth Observation Data Services)

Stuart is a Professor of the School of Earth and Environmental Sciences Faculty of Science at the University of Queensland. He specialises in measuring and monitoring environmental changes using earth observation data and publishing/sharing ecosystem data.

The majority of his work uses images collected from satellite and aircraft, in combination with field measurements, to map and monitor the Earth's environments and how they are changing over time. This work is done in collaboration with other environmental scientists, government environmental management agencies, NGO's and private companies. He publishes extensively with his collaborators, and currently has 185 papers in refereed international journals, 1 book, an online textbook, and 12 book chapters.

Stuart's background will allow him to contribute to a wide range of projects and put him in an ideal position for the coordination of this program.

COMPANY PROFILE- FrontierSI

FrontierSI is a not-for-profit company that was formally the Cooperative Research Centre for Spatial Information for 15 years. Our history and experience sets us apart from any other company in Australia and New Zealand. We exist to deliver major benefits to governments, industry and the community in Australia and New Zealand using our deep skills in spatial mapping, infrastructure, geodesy and standards. FrontierSI has unparalleled spatial skills and capability to form and manage collaborative teams comprising the very best researchers, institutions, government agencies and companies to deliver major outcomes quickly and effectively. Our experience spans multiple sectors including health, agriculture, natural resources, climate change, construction, utilities, defence and the built environment.

COMPANY PROFILE- Goonhilly Earth Station Ltd.

Goonhilly Earth Station Ltd. is a global communications services provider which owns and operates the world-renowned Goonhilly satellite station located in Cornwall, UK.

It provides a comprehensive range of connectivity and operational solutions to the space industry, GEO, MEO and LEO satellite fleet operators, broadcasters, as well as enterprises seeking to grow their businesses on Earth and in near and deep space. Customers include SES, Intelsat, Eutelsat and Inmarsat, as well as space agencies, governments, broadcasters and others. Since 2014 the partners in Goonhilly Earth Station Ltd. have been focused on building the company and investing to create a state-of-the-art global communications nexus.

The Goonhilly site has world-class satellite capacity spanning 75° West to 65° East. This is complemented by connections with bundles of subsea cables and fibre, and its new multi-million-pound datacentre. Thanks to the diversity of Goonhilly's infrastructure and its independence, Goonhilly's agile approach to developing and delivering solutions is challenging traditional industry models.

Having secured £32 million in funding and contract wins in 2018, Goonhilly is expanding its technology and service capabilities, and adding specialist transmission capabilities required by space users. These include the opening of an R&D centre at its new Farnborough site focusing on innovations in software defined radio, active phased array antennas and user terminals. These will become particularly important to support IP delivery using low-earth orbit (LEO) satellites.

Goonhilly is creating the world's first private deep space network in collaboration with the European Space Agency (ESA). The team is also working with researchers to create a combined radio telescope and deep space antenna. University researchers have designed a breakthrough cryogenic receiver and back-end processor that provide the ultra-low-noise performance required for this.

Goonhilly has also partnered with Surrey Satellite Technology Ltd (SSTL) and ESA on a pioneering private commercial space exploration project, Lunar Pathfinder. The aim is to take a number of small experimental CubeSats on a piggyback ride to the Moon for communications and navigation. Goonhilly is providing the LMSS (Lunar Mission Support Services) under contract to ESA.

As part of its fully-funded business plan Goonhilly will add ground stations in Australia and the Americas to complete its global deep space network. Using a combination of dish and phased array techniques, Goonhilly will deploy antennas with the flexibility to meet future frequency planning and mission needs.

For more information visit www.goonhilly.org

Bob Gough- Head of Business Development Australia and Asia Pacific, Goonhilly Earth Station