Spotlight on.....Asia

Dynamic Spectrum Access (DSA) technologies and evolving spectrum regulations are underway in Asia, helping governments, businesses, and communities to deliver affordable digital access and bridge connectivity across the region. The viability of DSA and TV White Spaces have been proven in numerous trials and commercial deployments, from remote villages to dense urban centers. Here's a round-up of activities within the region.....

Taiwan Dynamic Spectrum Access Pilot Group
Earlier this year the Taiwan Dynamic Spectrum Access Pilot Group was formed, which aims to contribute to the creation and development of a world-leading dynamic spectrum access ecosystem in Taiwan. Established by Alliance members: the Institute for Information Industry (III), Aviacomm, MediaTek Inc. Microsoft and Communication Research Center of National Taiwan University along with Power Automation Pte Ltd, the group aims to conduct forward-looking field experiments and verification, to develop local competence and international cooperation, in order to commercialize DSA technology. This will leverage Taiwan's tremendous capabilities in semiconductor design and fabrication, component and devices manufacturing, and systems integration and solutions.

Singapore leads TV White Space and dynamic access
The Alliance welcomed Singapore's Infocomm Development Authority (IDA) announcement regarding its regulatory framework for unlicensed access to unused radio spectrum in the broadcast TV frequency bands. Singapore is one of the first few countries in the world to implement such a framework for White Space and is driving dynamic access forward as it strives to become one of the Smartest cities in the world.

Radio spectrum in China
The Government of the People's Republic of China has already made significant advancements regarding management of its spectrum resources as it continues to go through a public consultation period on revising its management of the radio spectrum. Recently, the Alliance filed a submission to the Chinese State Radio Regulatory Commission (SRRC), which encourages the structured and consistent adoption of spectrum management. The Alliance aims to open up underused spectrum and therefore commends the SRRC in its efforts to enhance radio frequencies.

By moving towards dynamic allocation, the SRRC can make more resources available and maximize spectrum efficiency, at a time when Asia is exploring innovative technologies requiring spectrum.

Enhancing Connectivity with TV White Spaces in the Philippines
In early June, H Nwana spoke via Skype at the policy forum on 'Enhancing Connectivity for Economic Development: Opportunities from TV White Spaces' organized by the Lee Kuan Yew School of Public Policy-National University of Singapore and the Asian Institute of Management at Makati City in the Philippines. Philippine policymakers, industry representatives, online communities, civil society stakeholders and the media gathered at the forum to discuss the opportunities for using TVWS technologies to enhance connectivity and economic development particularly in the provinces. H Nwana shared his views on how the Filipino network infrastructure could be improved by utilizing more flexible, license-exempt access to the radio spectrum through the deployment of TV white space devices. The Dynamic Spectrum Alliance looks forward to building a strong relationship with the Lee Kuan Yew School of Public Policy-National University of Singapore and the Asian Institute of Management as we focus on encouraging the enhancement of communication networks in the Asian region.

TVWS + LTE provide the best of both worlds
NICT, a Dynamic Spectrum Alliance member based in Japan, has developed several world standard based TV White Space devices, along with other technologies (e.g. IEEE802.22, IEEE802.11af, and LTE release 8 (eNB,smartphone) and White Space database compliant with FCC, Ofcom, and the Japanese TV band contour calculation algorithm. It has also done world-first field trials using these international multi-band standard devices.

Automotive TV White Space Innovation
Last year, the Intelligent Transportation Systems World Congress saw new Alliance member, Toyota ITC, demonstrate the benefits of TV White Space. In case of a major disaster where the telecom infrastructure fails, Toyota ITC highlighted that TV White Spaces can be used to connect WiFi devices to working infrastructures so that short messages can be uploaded to the internet.

This year, Toyota ITC successfully implemented an *ad-hoc* vehicle-to-vehicle network using TV White Spaces with moving cars using geo-location models. Toyota ITC's work is made possible by an extensive collaboration with the Ministry of Communications of Japan, NICT and local agencies in Kyushu, which provided permission to use TV White Space in some parts of Kyushu Island.

TV White Space in Disaster Response
When Typhoon Haiyan devastated central parts of the Philippines in November 2013, disaster relief respondents needed an on-the-ground communications network to provide support to victims of the disaster. The Department of Science & Technology's (DOST) ICT Office built a TV White Spaces based network comprising of a VSAT (for backhaul), three TVWS radios and two WiFi routers which was up and running in a matter of hours. In establishing the TVWS network, the ICT Office relied on a number of parties to play supporting roles, including Filipino-Singaporean firm Nityo Infotech, the United States Agency for International Development (USAID), international development agency NetHope and of course DSA founding member, Microsoft.

To read more about these activities, go to the Q2 2014 newsletter where there is more detail about each of these projects:
http://www.dynamicspectrumalliance.org/newsletter2/index.html.