



## News



### GNSS Spectrum Attack

Moves are underway to defend the radio spectrum used for signals from Global Navigation Satellite Systems. GNSS systems include the existing GPS and GLONASS and the proposed Galileo system.

The international use of the radio spectrum is regulated by the International Telecommunications Union, which runs the World Radio Congress every two years. The WRC is a fortnight-long 'talk-fest' at which ITU member states propose uses for the spectrum. While states are free to allocate spectrum to transmitters within their own boundaries, they are bound to follow WRC rules whenever radio transmissions leak over their borders. Since this applies to most transmitters of any significance, the WRC sets de facto use of the spectrum for everyone. Furthermore, the WRC is unusual in world circles inasmuch as every country has only one, equal, vote. This means that the ability of the big powers, such as Europe or the US, to force events, is limited.

The next WRC will be held in April/May 2000. It will vote on proposals from the mobile satellite communications services industry to share spectrum in the radio navigation band which is currently used by GNSS. At the last congress, WRC97, Proposition 200 urged the use of frequency around 1610 MHz, currently used by the GPS L1 signal, for mobile services. That move was referred back for more study, ahead of a vote in 2000.

The mobile industry argues that GNSS is a profligate user of spectrum. In particular, they argue that GNSS can be made to operate satisfactorily with much less bandwidth than is currently allocated. However, the operators of the GPS argue

strongly that this is not the case. Furthermore, there is already a significant problem with energy from GLONASS signals leaking into adjacent bands. Reducing the available spectrum would exacerbate this.

Hence there is real concern that if spectrum is reduced, it will also reduce the effectiveness of the current system, and prevent planned augmentations. There are numbers of augmentations planned to the current system, such as the new precise positioning frequency called L5 on GPS, or the satellite-based augmentation systems such as Japan's MSAS, the US' WAAS and the European EGNOS. Within the decade, space will also need to be found for Galileo.

Naturally enough, owners of the system, such as the US and Russian governments, and users, such as the airline operators, have been pushing strongly to have Proposition 200 defeated.

Now the International Association of Geodesy and the International Association of Geodesy and Geophysics, which have just held their 22nd annual conference (IUGG99, Birmingham University, 21-29 July) have joined the fray, demanding a moratorium on new spectrum allocation in the space navigation bands. Pressure is also building on FIG, the international survey institution to also put pressure on the WRC. Matt Higgins, a senior surveyor with the Queensland Department of Natural Resources and an Australian representative on FIG, has proposed that the FIG executive write directly to the executive of the ITU on the matter.

(Source: Spatial Business Newsletter)

### EarthWatch Signs LANDINFO As Australian Distributor

**LONGMONT, Colorado, 21 January 2000** - EarthWatch Incorporated today announced the signing of LANDINFO, the Spatial Division of the Sinclair Knight Merz Group, to distribute EarthWatch's high resolution satellite imagery, and other EarthWatch digitalglobe.com on-line imagery, in Australia and New Zealand commercial and civilian markets.

Herb Satterlee, EarthWatch president and chief executive officer emphasised, "EarthWatch continues to focus on making access to the widest array of high-resolution geospatial information as effortless as possible for our customers. This agreement with LANDINFO provides our customers in both Australia and New Zealand with high-quality geospatial products through a very knowledgeable local industry leader".

Australia and New Zealand have long been committed to the acquisition and maintenance of comprehensive collections of

national geographic information, and their geospatial information users are among the most innovative and progressive in the world. LANDINFO already partners with both government organisations and the private sector to make extensive use of satellite imagery, which adds significant value to their spatial consulting and applications services business.

Tony Wheeler, LANDINFO's General Manager, said, "The relationship leverages key LANDINFO competencies across a large number of consulting and map-related markets". He added that "The signing of this agreement with EarthWatch will enable us to unleash geographic imagery of a scale and accuracy that is only presently available for several times the cost and involving lengthy time delays. This new activity is expected to be the foundation of a whole new business focus for our organisation".

Industry estimates of near term worldwide demand for high-resolution satellite imagery are in excess of US\$ 1 billion

annually. The pending availability of EarthWatch imagery, and on-line high-resolution imagery archives, is expected to further stimulate significant market growth and additional demand for value-added information products and services. Estimates of the region's near-term annual market size range as high as A\$150M.

The value of the transaction was not announced.

LANDINFO is a leading provider of consulting services in the data capture, mapping and map publishing, and geographic information markets. It is the spatial division of Sinclair Knight Merz, which employs more than 2,500 in offices across Australia, New Zealand, South East Asia, the Pacific, and Europe. LANDINFO has more than 140 employees, including many who were recently added as a result of the company's acquisition and privatisation of AUSLIG, the country's national mapping and surveying agency, and has dominant positions across key regional mapping and geographic information markets.

EarthWatch is a commercial imagery and information con-

tent provider located in Longmont, Colorado. The company's key product is the digitalglobe.com on-line imagery store, an Internet-based global archive of geographic information. It is also launching its own constellation of earth imaging satellites, allowing the company to provide custom-tasks high-resolution panchromatic and multispectral imagery to commercial businesses and governments worldwide. Key investors include ITT, Morgan Stanley, Capital Research, and Ball Aerospace.

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## GPS SA Switched off

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U.S. President Bill Clinton has recently lifted the Defense Department's intentional degradation of global positioning system (GPS) signals available to the public. Labelled "selective availability" (SA), the security system downgraded available accuracy to 100 meters for civilian users. Lifting the constraint means that civilian users of GPS will be able to pinpoint locations up to ten times more accurately than they do now. GPS is a dual-use, satellite-based system that provides accurate location and timing data to users world-wide.

Originally developed by the Department of Defense as a military system, GPS has become a global utility. It benefits users around the world in many different applications, including air, road, marine, and rail navigation, telecommunications, emergency response, oil exploration, mining, and many more. Civilian users will find a dramatic improvement in GPS accuracy with the discontinuation of SA. For example, emergency teams responding to a cry for help can now determine what side of the highway they must respond to, thereby saving precious minutes. This increase in accuracy will allow new GPS

applications to emerge and continue to enhance the lives of people around the world.

(Source: OGC Bulletin)

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## ACRS 2000

*The 21st Asian Conference on Remote Sensing  
Taipei, Taiwan, 4-8 December 2000*

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The 21st Asian Conference on Remote Sensing (ACRS 2000) will be held on 4-8 December 2000 at the Taipei International Convention Center, Taipei, Taiwan. It is organised by Chinese Taipei Society of Photogrammetry and Remote Sensing, Center for Space and Remote Sensing

## *Call for Presentations*

### **Fourteenth International Conference on Applied Geologic Remote Sensing**

**6-8 November 2000  
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Research of National Central University, and Asian Association on Remote Sensing. The Conference provides a forum for exchanging academic and technical information, promoting regional co-operation, and promoting operational applications of remote sensing, GIS, and space technologies. Suggested topics are:

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|-----------------------------------|-------------------------------|
| 1. Agriculture and Soil           | 9. Global Change              |
| 2. Digital Photogrammetry         | 10. Global Positioning System |
| 3. Hazard Mitigation              | 11. Image Processing          |
| 4. Education and Profession       | 12. Land Use                  |
| 5. Environment                    | 13. Mapping from Space        |
| 6. Forest Resources               | 14. Oceanography              |
| 7. Geology                        | 15. Water Resources           |
| 8. Geographic Information Systems | 16. Others                    |

#### Conference Organisations

Honorary Chairman: Chao-Han Liu (National Central University)

Secretary General of AARS: Shunji Murai (University of Tokyo)

Steering Committee: Bruce Forster; John van Genderen; Armin Gruen; Chin-Chao Koh; Lim Hock; Nik Nasruddin Mahmood; Nguyen Dinh Duong; Ryutaro Tateishi; Tong Qinxi; Suvit Vibulsresth.

**ONE-PAGE ABSTRACT MUST BE RECEIVED  
BY 31 JULY 2000**

**ACCEPTANCE NOTIFICATION  
BY 15 AUGUST 2000**

**FULL PAPER MUST BE RECEIVED  
BY 30 SEPTEMBER 2000**

#### Registration

The non-refundable registration fee for participants including one copy of the proceedings and the CD ROM is US\$ 100 per person. Each presenting author is required to register in advance by 30 September 2000. All participants should submit a registration form to the Secretariat, Ms. Mei-Yuan Lai.

The registration form, details in accommodation, and local arrangements may be acquired from the home page.

#### Abstracts should be directed to

Prof. Liang-Chien Chen  
Center for Space and Remote Sensing Research  
National Central University  
E-mail: acrs2000@csrsr.ncu.edu.tw

#### Local Arrangements should be directed to

Ms. Mei-Yuan Lai  
Center for Space and Remote Sensing Research  
National Central University  
E-mail: maylai@csrsr.ncu.edu.tw

Please see ACRS 2000 updated at <http://acrs2000.csrsr.ncu.edu.tw> or <http://acrs2000.csrsr.org.tw>

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