



## **Memorandum of Understanding**

### **Joint Centre for Spatial Information**

#### **Between**

**The Centre of Earth Observation and Digital Earth, CAS, China**

#### **And**

**The Cooperative Research Centre for Spatial Information, Australia**

### **Background**

The Centre of Earth Observation and Digital Earth (CEODE) has been established on 23 October 2007 with RMB600 million fund from the Chinese Academy of Sciences/ Chinese government in order to coordinate and strengthen Chinese capacity in the area of earth observation and digital earth in response to strong demands generated from the Chinese space programs such as,

- 100 satellites to be launched by the year 2020 including a constellation of 8 small satellites for environmental monitoring and disaster mitigation (the HJ Satellite Constellation),
- The Chinese Lunar mission launched in October 2007, and
- The airborne remote sensing system with 4 aircrafts and more than 11 sensors.

CEODE has assembled massive infrastructure to support such missions, for example,

- Three satellite ground receiving stations,
- The advanced remote sensing and data processing systems,
- A spatial data centre, and
- A digital earth laboratory.

The Cooperative Research Centre for Spatial Information (CRCSI) has attracted AUD\$93 million from Australian Governments and industry. Over the last four years, the CRCSI has significantly boosted Australian R&D capacity in the area of:



- Positioning (Global Navigation Satellite Systems such as GPS)
- Digital imaging
- Remote sensing
- Visualization of spatial information
- Spatial data infrastructures

A range of high quality research outcomes have been generated from its 20 large project and there will be more to come from new projects.

Because of the global nature of earth observation and digital earth science and technologies, both parties agree to set up this Joint Centre for Spatial Information (JoCSI) in order to explore the complementary capacities of CEODE and CRCSI. This MoU supplements the workshop minute between CAS and CRCSI signed on 24 May 2006 between the Bureau of International Cooperation of the Chinese Academy of Science and the Cooperative Research Centre for Spatial Information, Australia.

## **Personnel**

### *Co-Directors:*

Prof. Guo Huadong (Director-General of CEODE)  
Mr. Peter Woodgate (CEO of CRCSI)

### *Co-Deputy Directors:*

Prof. Zhang Bing (Deputy Director-General of CEODE)  
Dr. Linlin Ge (Senior Research Fellow and Project Leader of CRCSI)

### *Staff:*

Initially 20-30 researchers (including postgraduate students) from CRCSI and researchers from CEODE

## **Work Space**

CEODE will provide an office/ lab in Beijing to accommodate the Chinese staff of JoCSI and visiting staff from the Australian side. CRCSI will provide an office/ lab initially in Sydney to accommodate the Australian staff of JoCSI and visiting staff from the Chinese side. As JoCSI grows, office/ lab spaces will be made available at other CRCSI nodes in Melbourne and Perth as needed



## **Funding**

JoCSI staff will be funded by CEODE and CRCSI from their existing operations. However, JoCSI will actively apply to external funding agencies such as the Natural Science Foundation of China, the Chinese Scholarship Council, the Australian Research Council, and the Australian Academies of Science and Technological Sciences and Engineering in order to support the reciprocal visits of its staff.

## **Operation**

JoCSI will initially hold teleconference every fortnight and then on a regular basis to review its routine operation and to discuss key issues. Selected JoCSI staff will visit the other side for 1-12 months to conduct collaborative research. JoCSI will also hold biennial conferences/ workshops alternatively in China and Australia to exchange research outcomes.

## **Priority areas/ projects**

Research will be considered in the following areas initially:

- Earth observation methodology
- Digital earth framework and applications
- Near real-time InSAR mapping and monitoring of mining compliance
- Mapping the West of China
- InSAR mapping of urban ground surface displacement due to construction and groundwater extraction
- Lunar topographic mapping
- Natural disaster mitigation
- Comparative remote sensing studies between northern and southern hemisphere
- Development and testing of advanced remote sensing systems
- Positioning and attitude determination for airborne remote sensing platforms
- Distribution and visualization of spatial information
- Joint commercialization of research outcomes
- Research staff and student exchange

Other research issues may also be considered.



**Annual Review**

The Joint Directors will conduct an annual review of the operation of the JoCSI. The review will consider the performance of the Centre for the past year, the directions for the future, management arrangements. It will have the ability to recommend continuation, changes or termination.

**SIGNED IN BEIJING ON : .....**

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Professor Guo Huadong  
Director-General  
Centre for Earth Observation and  
Digital Earth  
Chinese Academy of Sciences

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Peter Woodgate  
Chief Executive Officer  
Australian Cooperative Research  
Centre for Spatial Information