

ISPRS/WGCV Task Force Radiometric/Geometric Standards

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ISPRS Activities

- WG II/4 on standards working with ISO and OGC on image transfer standards
- Joint sessions at FIG/ASPRS Congress in Washington (April 2002) on standards, interoperability and terminology
- Symposia in 2002

Relevant ISPRS Symposia 2002

DATE	EVENT	SITE
8-12 Jul 2002	GeoSpatial Theory, Processing and Applications	Ottawa, CANADA
20-23 Aug 2002	"Integrated System for Spatial Data Production, Custodian and Decision Support"	Xian, CHINA
10-15 Nov 2002	"Integrating Remote Sensing at the Global Regional and Local Scale"	Denver, USA
3-6 Dec 2002	"Resource and environmental Monitoring"	Hyderabad INDIA

Background

TM Sub Group Meeting October 2000:

‘A standard format for sensor parameters should be established. CEOS should promote the use of validation data sets and provide information on those which exist.’

WGCV Resolution 2. Oct 2000

Standardisation of sensor parameters.

- **Noting** the disparate way in which Earth observing sensor parameters are specified and quoted, and that the extra terrestrial community adopts a standard format, and
- **Recognising** that proper use, understanding and intercomparison of sensor parameters depends on clear unambiguous definition, WGCV
- **Recommends** that a task force be established with ISPRS to **formulate a plan for standardisation of radiometric and geometric parameters of sensors.**

RESOLUTIONS FROM 14TH PLENARY

Action 14/16: ISPRS to identify the profile of participants required for a joint ISPRS/WGCV Task Force on radiometric and geometric standards and to provide this to the WGCV Secretariat (ydesnos@esa.int) by end of January 2001.

Action completed and discussed at WGCV18

Design for Task Force

- Composition:
 - roughly equal proportions of ISPRS and CEOS-appointed members
 - of manageable size but have access through its members to a very broad community of experts
 - Space agencies, standards laboratories, private sector, academics
- Task Force member should have the means and be willing to...
 - participate in Task Force plenaries (at parent organization expense)
 - contribute non-proprietary information for the good of the whole
 - seek answers to identified information needs
 - liaise with colleagues to obtain information and contribute same to the Task Force
 - read and evaluate reports, white papers, and other output from the Task Force
 - Others, as identified

Discussion at WGCV18:

- Task force to be set up and agencies and subgroups to be represented;
- NIST document could be a start point;
- Task force should not get too involved in nomenclature definition but should aim to provide clarification and cross referencing

ACTION on ID to report to ISPRS Comm I; to ask if WGI/1 will chair the task force; to encourage chair to set up first meeting.


ACTION on WGCV to nominate members

Current position

- ISPRS has approached several people to chair the group
 - No success to date
 - A good candidate who was willing to do the job was not given permission by his agency
- Sub groups have expressed interest and asked for clarification:
 - Jim Shuie
 - Jeff Privette

Microwave Sensors Subgroup

‘I have drafted a few terms in Microwave Radiometry, and I am interested in clearing up some ambiguities about some terms that are being used cavalierly in both optical and microwave fields, whose meaning may be different. For instance the term "resolution," "IFOV" etc almost carry the same meaning in both fields, but they can mean different percentage of energy included in the IFOV in Question.’ *Jim Shuie*



George Joseph, presentation to WGCV 16
How well do we understand Earth observation electro-
optical sensor parameters?

Definitions and nomenclature for spatial resolution
Radiometric resolution
Spectral bandwidth
Temporal resolution
Data compression

Objectives

- Define the problem
- Determine what definitions exist
- Draw up a list of most used standard parameters for geometric and radiometric calibration of spaceborne sensors for which no unambiguous definition exists.
- Define these parameters and cross reference these definitions to those parameters which are not considered to be 'standard'.
- Clarify use of different terms by different communities.
- Communicate and consult widely with the user community

Where do we start?

- Existing documentation
 - The SPICE format used for extra terrestrial missions
 - NIST Handbook 152
 - Others
- Identify major ambiguities

Method of work

- Appoint chair
ACTION: ISPRS and WGCV
- Nominate members
ACTION: WGCV members [Sub group chairs, Agencies], ISPRS
- Collect and distribute existing information
ACTION: WGCV members [Sub group chairs, Agencies], ISPRS
- Kick off meeting [possibly in Denver, November 2002 at ISPRS Symposium]
ACTION: ISPRS
- Work by email
- Ad hoc meetings at opportune times
- Review by WGCV plenary and ISPRS working groups

People - the most important ingredient!

- Chair
- Sub group representatives
- Agency representatives
- National standards institute representatives
- Other experts (ISPRS)

Conclusion

- With support from WGCV members the Task Force will be formed and convened by CEOS Plenary in November
- Task Force chair or ID will report to WGCV20