

## ISPRS Society

### International Society for Photogrammetry and Remote Sensing

*The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*

All Archives published from June 2000, volume XXX onwards, including the Archives from the Amsterdam Congress, are distributed by GITC bv in the Netherlands. Hardcopies and CDs may be purchased from GITC. A list of volumes and CDs is available from GITC, or from the ISPRS web-site.

Copies of the Archives prior to June 2000 are still available from RICS Books. A list of available copies is shown below, an update can be obtained from RICS or from the ISPRS web-site.

Contact addresses:

GITC bv  
 PO Box 112  
 8530 AC Lemmer  
 The Netherlands

RICS Books  
 Surveyor Court  
 Westwood Business Park  
 Coventry CV4 8JE

Tel: +31 514 561854  
 Fax: +31 514 563898  
 E-mail: mailbox@gitc.nl  
 www.gitc.nl

Tel: +44 20 7222 7000  
 Fax: +44 20 7334 3851  
 E-mail: mailorder@rics.org.uk  
 www.ricsbooks.org

ISPRS web-site: <http://www.isprs.org/>

The following volumes are available from RICS Books:

Year	Vol No	Event and venue	Repository
1994	XXX-1	Comm I Symposium - Como, Italy	RICS Books
1994	XXX-2	Comm II Symposium - Ottawa, Canada	RICS Books
1994	XXX-3	Comm III Symposium - Munich, Germany	RICS Books
1994	XXX-4	Comm IV Symposium - Athens, USA	RICS Books
1994	XXX-5	Comm V Symposium - Melbourne, Australia	RICS Books
1994	XXX-6	Comm VI Symposium - Beijing, China	RICS Books
1994	XXX-7	Comm VII Symposium - Rio de Janeiro, Brazil	RICS Books
1996	XXXI-B1	XVIII ISPRS Congress, Vienna, Commission I	RICS Books
1996	XXXI-B2	XVIII ISPRS Congress, Vienna, Commission II	RICS Books
1996	XXXI-B4	XVIII ISPRS Congress, Vienna, Commission IV	RICS Books
1996	XXXI-B5	XVIII ISPRS Congress, Vienna, Commission V	RICS Books
1996	XXXI-B6	XVIII ISPRS Congress, Vienna, Commission VI	RICS Books
1996	XXXI-B7	XVIII ISPRS Congress, Vienna, Commission VII	RICS Books
1996	XXXI-A,B(7)	XVIII Congress - Vienna, Austria , Full set	RICS Books
1997	XXXII-6W1	Comm VI Workshop - Padua, Italy	RICS Books
1997	XXXII-3-4W2	Comm III/IV Workshop - Stuttgart, Germany	RICS Books
1997	XXXII-2-3W3	Comm II/III Workshop - Haifa, Israel	RICS Books
1997	XXXII-6W4	Comm VI Workshop - Bahia Blanca, Argentina	RICS Books
1997	XXXII-5C1B	CIPA Conference - Göttenborg Sweden	RICS Books
1998	XXXII-1	Comm I Symposium – Bangalore, India	RICS Books
1998	XXXII-2	Comm II Symposium – Cambridge, UK	RICS Books
1998	XXXII-3	Comm III Symposium – Columbus, USA	RICS Books
1998	XXXII-4	Comm IV Symposium – Stuttgart, Germany	RICS Books
1998	XXXII-5	Comm V Symposium – Hakodate, Japan	RICS Books
1999	XXXII-6	Comm VI Symposium – Bandung, Indonesia	RICS Books
1998	XXXII-7	Comm VII Symposium – Budapest, Hungary	RICS Books
1998	XXXII-7T1	WG VII/2 Tutorial – Dehra Dun, India	RICS Books
1999	XXXII-7C2	UNISPACE III Conference - Vienna Sweden	RICS Books
1999	XXXII-3-2W5	WG III/ 2 & 3 Workshop – Munich, Germany	RICS Books
1999	XXXII-7-4-3W6	ICWGIV/III.2, EARSeL et al Valladolid, Spain	RICS Books

1999	XXXII-6W7	WGVI/3 Workshop ,Cotonou, Benin	RICS Books
1999	XXXII-7/W9	WG VII/2 Workshop – Dehra Dun, India	RICS Books
1999	XXXII-2-5-3/W10	WG II/1 et al, Bangkok, Thailand	RICS Books
1999	XXXII-5/W11	WG V/2 & 5 Thessaloniki, Greece	RICS Books
1999	XXXII-4/W12	WG IV/4 et al, Beijing, China	RICS Books
1999	XXXII-5/W12	WG V/3, V/4, ICWG V/III, SIG Wshop, Onuma, Japan	RICS Books
1999	XXXII-3/W14	WG III/2,5 Workshop, La Jolla, CA, USA	RICS Books

The following volumes are available from GITC:

Year	Volume	Event and venue	Repository
2000	XXXIII-B1	XIX ISPRS Congress, Amsterdam, Commission I	GITC
2000	XXXIII-B2	XIX ISPRS Congress, Amsterdam, Commission II	GITC
2000	XXXIII-B3	XIX ISPRS Congress, Amsterdam, Commission III	GITC
2000	XXXIII-B4	XIX ISPRS Congress, Amsterdam, Commission IV	GITC
2000	XXXIII-B5	XIX ISPRS Congress, Amsterdam, Commission V	GITC
2000	XXXIII-B6	XIX ISPRS Congress, Amsterdam, Commission VI	GITC
2000	XXXIII-B7	XIX ISPRS Congress, Amsterdam, Commission VII	GITC
2001	XXXIV-5/W1	International Workshop Recreating the Past - Visualization and Animation of Cultural Heritage	GITC



## Byzantine and Seldjuk Civilisations in Anatolia

By M. Orhan Altan, ISPRS 2004 Congress Director

ISTANBUL

ISPRS  
2004



Following the death of the Roman emperor Theodosius, the Roman Empire, as it was then known, was divided between his two sons, one of whom founded the Eastern Roman Empire, better known as the Byzantine Empire. Centred on Byzantium, today's Istanbul, it was to last for

1123 years from 330 to 1453. With the change of ruler, the city's name was changed to Constantinopolis denoting the "City of Constantine". A further fundamental change was the conversion to Christianity, both changes having a radical influence on the culture of Anatolia.



The Bleu Mosque facing Hagia Sophia and the old city of Istanbul.

Though the Byzantine Empire spread throughout the whole of Anatolia and a large part of the Eastern Mediterranean, the main buildings are to be found in Istanbul. It was after all a culture of palaces, churches and monasteries representing mainly a culture of the aristocracy and the religious order.

Constantinopolis withstood numerous attempts to capture it, being defended by its city walls with its 96 towers and 7 fortified gates. So confident were the Byzantines of the deterrent power of the city's fortifications that they called their city, the city defended by God ! To give thanks for this protection by the supreme being they built a remarkable building to his greater glory in 532. The church of Hagia Sophia, or Ayasofya as we know it today, was built with



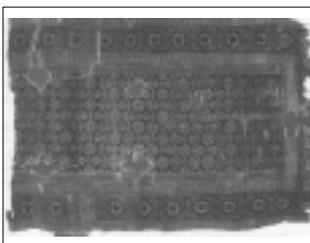
*A view from Hipodrom and Hagia Sophia in the background.*

materials collected from far and wide within the empire. The imposing dome measuring over 32 metres in radius stood at a height of 55 metres, later being raised to 61 metres when the church suffered damage due to an earthquake. It is rightly considered to be one of the most outstanding edifices of the Byzantine Empire, not only for its architecture but also for the fineness and beauty of its religious mosaics.

The area in front of Hagia Sophia was called the Augustean where the imperial palace stood. Though it no longer exists, the floor mosaics have recently been restored and are to be seen in a separate museum. Part of the large oblong square was used as a hippodrome, but though nothing remains of this building, the area now boasts the pink granite obelisk commemorating the victories of the Egyptian pharaoh Tutmoses III. The four bronze stallions covered in gold leaf are no longer on their original site, having been removed to the St. Marco church in Venice. However, the Twisted Column in the square comes from the temple of Apollo in Delphi. Near to the Hippodrome stood a tall column acting as the pedestal to the statue of Constantine. Unfortunately it was destroyed by lightning, though the pedestal still stands showing signs of damage by fire.

Another church of note is the church of Chora near to the city walls. Renowned for its mosaics and frescoes, their lively colours have survived due to their being covered with plaster which protected them for centuries, the religious decoration coming to light once again after 50 years ago.

Turning to Anatolia, there are still numerous Byzantine buildings to be seen. Among the most important are the church of the Virgin Mary at Ephesus, the cathedral at Hierapolis (Pamukkale), the church of St. Nicholas (known as Father Xmas) at Myra (Demre), the monasteries at Konya and Trakya and the most important of all the churches and underground dwellings in Cappadocia.



*A carpet from the Seldjuk period.*



*Aqueduct of Valens.*

The cultural impact of Byzantium, though not as forceful as the Greek and Roman heritage, did in fact leave behind its imprint in Anatolia, thus adding to the rich and varied cultural mosaic of the region.

As from 1071 Anatolia began to be influenced by the influx of the Seldjuk dynasties who came from Persia and the neighbouring areas. Having defeated the Byzantine armies at the battle of Malazgirt, the new Seldjuk empire came into being in 1078, having Nicea or present day Iznik as its capital. This relatively short lived empire was overtaken by the Mogul empire, becoming a vassal state only to be superseded by another Turkish state, the Ottomans.

The cultural heritage left by the Seldjucks was a forerunner of the Ottomans, both being a Moslem culture. Mosques, schools and religious buildings are the forerunners of the Islamic architecture. The first Islamic schools and universities date back to this period, together with Kervansarays, communal baths and palaces. The mosaics from the Byzantine era were replaced by the sky blue ceramic tiles, widely used in Seldjuk architecture. Today we can see buildings dating from this period mainly in city centres in central Anatolia like Kayseri, Konya, Sivas and Kastamonu.

One of the most important legacy of the Seldjucks was the introduction of carpet weaving into Anatolia. Though weaving of floor coverings existed beforehand, the foundation of Anatolian carpet weaving was the introduction of the double knot. Designs varied, each geographic region having their own designs and colouring, derived from certain plants and roots growing in their region. But more of this later !

### **IMPORTANT NOTICE !**

We kindly recommend you to read carefully this serial about Turkey, and to keep it for your further reference. By the end of 2003, there will be a quiz and winners will be awarded with promotional gifts of the ISPRS 2004 Istanbul Congress.



## Report of International Conference on Spatial Information for Sustainable Development

By Professor Tuan-chih Chen, ISPRS Events Calendar Editor

The International Conference on Spatial Information for Sustainable Development held in Nairobi, Kenya, 2-5 October 2001 was co-organised by the International Federation of Surveyors (FIG), the Institution of Surveyors of Kenya (ISK) and the United Nations Centre for Human Settlements (Habitat). The event was further co-sponsored by the United Nations Economic Commission for Africa (UN ECA), International Cartographic Association (ICA), and by us, the International Society for Photogrammetry and Remote Sensing (ISPRS). The Ministry for Lands and Settlement of the Republic of Kenya was further supporting the conference.

The theme of the Conference, spatial information and its management, were clearly in the focus for all surveyors and other stakeholders worldwide as they go about their diverse tasks in development planning and resource management. The Conference was also envisaged as a contribution to the international community's efforts to advance the implementation of the Habitat Agenda, which, recognising the vital importance of appropriate surveyed and mapped land resources, urges governments and other stakeholders at all levels to develop and support improved and integrated land management by, among others, "developing and implementing integrated land information and mapping systems and practices for managing land, including land value assessment and seek to ensure that such

easier access to this information by users.

The Conference was opened by His Excellency Daniel T. arap Moi, President of the Republic of Kenya.

As one of the co-sponsors, ISPRS Council has assigned two officers, Prof. Heinz R ther (Financial Commission Chairman) and Prof. Tuan-chih Chen (Events Calendar Editor) as official representatives of ISPRS on this Conference.



Official representatives of ISPRS on this Conference: Prof. Heinz R ther (right) and Prof. Tuan-chih Chen (left).

### Theme, Topics and Programme

The theme of the conference was Spatial Information for Sustainable Development. The theme was divided into three sub-themes so that each of the three conference days covered one of the main themes. Parallel sessions were organised on the topics listed under each sub-theme.

Each day was opened by a plenary session on the day's theme. The keynote speakers included Prof. Holger Magel, Vice President of FIG, Technische Universit t M nchen (Germany); Dr. Chukwudozie Ezigbalike, United Nations Economic Commission for Africa; Prof. John McLaughlin, University of New Brunswick (Canada); Prof. Heinz R ther, ISPRS Financial Commission Chairman, University of Cape Town (South Africa); and Prof. Kirsi Virrantaus, Chair of FIG Commission 2, Helsinki University of Technology (Finland).

### Recommendations from the Conference

After the closing of this Conference, recommendations were generated by the organiser. The Conference recommendations are intended to support politicians, senior managers and professional organisations by providing greater understanding of the need for Spatial Data Infrastructures (SDI's) and how they can be used to support sustainable development.



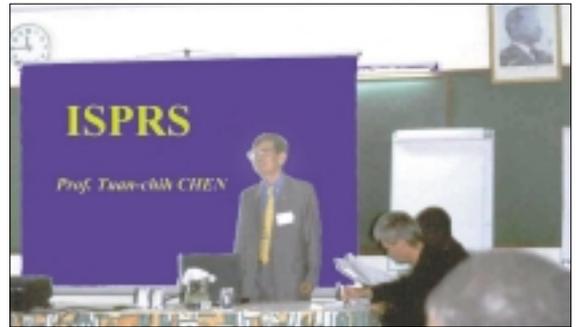
The Conference was opened by His Excellency Daniel T. arap Moi, President of the Republic of Kenya.

information is available". The Conference was also expected to contribute to the implementation of important elements, all of which address the need for the generation, strengthening and promotion of relevant data and information, including spatial information, for more effective decision-making, and the need for ready availability and

The Conference recognised that every National Spatial Data Infrastructure (NSDI) is different due to a variety of cultural, social and economic factors unique within each country. However, there are a significant number of common elements that can be shared. It is recognised that a key success factor of implementing NSDI is the management of information as an asset, just as finance and human resources. Mature NSDI's are complex solutions involving a number of stakeholders. However, those who have a NSDI have started with clear short-term objectives and corresponding simple solutions. The use of Spatial Information to support sustainable development will only be achieved if solutions start with realistic objectives and grow incrementally through political and market needs.

Many of the key infrastructure requirements of NSDI, e.g. pervasive telecommunications and internet access are not widely available in some countries, this limits the applicability of leading edge NSDI technical solutions. Vendors are encouraged to understand the needs of developing countries and design and market appropriate technical solutions.

NSDI's are underpinned by effective partnerships and co-operation amongst a wide variety of multi-disciplinary stakeholders in public and private sectors and the end



*Prof. Tuan-chih Chen was presenting his oral paper.*

user communities. Countries are encouraged to form appropriate policy and institutional frameworks and facilitate co-operation amongst stakeholders. The creation of a 'proof of concept application' can be used to gain and continue political support whilst feeding into the formulation of NSDI policy and strategy.

The Conference recommendations are intended to support politicians, senior managers and professional organisations by providing greater understanding of the need for spatial data infrastructures and how they can be used to support sustainable development.

# Now available!

## Volume XXXIII proceedings of the XIXth ISPRS 2000 Congress

*Valuable information at your fingertips*

Set of CD-ROMs (3 CDs) : € 68,00 \*

Set of hardcopies (14 books)\*\*

\* = Prices do not include VAT (if applicable) nor shipping & handling

\*\* = Prices on request

Contact Jeroen Zaagemans at GITC bv: [jeroen.zaagemans@gitc.nl](mailto:jeroen.zaagemans@gitc.nl)

**GITC bv**  
 P.O. Box 112, 8530 AC Lemmer, Nieuwedijk 43, 8531 HK Lemmer  
 Tel.: +31 (0)514 561854, Fax: +31 (0)514 563898  
 E-mail: [mailbox@gitc.nl](mailto:mailbox@gitc.nl), Website: [www.gitc.nl](http://www.gitc.nl)

