



Technical Seminar on Reference Frame in Practice Rome - Italy, 4th - 5th May 2012

Venue: Sala Consiglio (room), Palazzo Corrodi - Cassa Geometri,
Address - 4 Lungo Tevere Arnaldo Da Brescia, I-00196, Roma, Italia

www.cassageometri.it

PROGRAM

Friday 4th May 2012

Session Chair – FIG Commission 5 Chair – Mr Mikael Lilje

0850 – 0900 Welcome and Opening Remarks – Mr Mikael Lilje

0900 – 0945 Plenary: The Role of Geodesy– GGOS and Future Trends

Presenter – Prof. Chris Rizos President IAG

Session Outline: Overview of the transition from traditional to modern geodesy, describing the evolution of roles, impact of services, central importance of reference frame definition, contributions to geoscience and GGOS

0945 – 1030 Session 1.1: Global Terrestrial Reference Systems and Frames

Presenter – Dr Zuheir Altamimi

Session Outline: Discussion on ITRS / ITRF / WGS-84; transformations; how ITRF is determined; on how geodetic techniques contribute to ITRF - VLBI, GNSS, DORIS, SLR.

1030 – 1100 Morning Tea and networking with Young Surveyors / Professionals
Restaurant, Cassa Geometri – Sponsored by Cassa Geometri

1100 – 1230 Continuation of Session 1.1: Global Terrestrial Reference Systems and Frames

1230 – 1330 Lunch
Restaurant, Cassa Geometri – Sponsored by Cassa Geometri

1330 – 1415 Continuation of Session 1.1: Global Terrestrial Reference Systems and Frames

1415 – 1530 Session 1.2: Regional and National reference systems

Presenters – Eng. Joao Torres and Dr John Dawson

Session Outline: The mathematical relationship between the ITRF and regional or national reference frames and how this is done will be described using EUREF and APREF as case studies. Topics covered include the definition, realisations, GNSS CORS infrastructure and campaigns, transformations, and monitoring of such regional reference frames.

1530 – 1600 Afternoon Tea and networking with Young Surveyors / Professionals

Restaurant, Cassa Geometri – Sponsored by Cassa Geometri

1600 – 1730 Session 1.3: Worked examples of Terrestrial Reference Frame Realisations

Presenters – Dr John Dawson, Prof Volker Schwieger, and Mr Nic Donnelly

Session Outline: Case studies from countries describing how their geodetic datum has been realised in relationship to a regional reference frame or ITRF and any local problems and issues. It also includes the discussion of issues for an intra-plate country as opposed to one across a plate boundary.

1900 – 2200 Seminar Dinner in conjunction the Young Surveyors Conference

Ballroom Cicerone Hotel, Via Cicerone, 55/C, Rome

<http://www.hotelcicerone.com/>

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Saturday 5th May 2012

Session Chair – IAG President – Prof. Chris Rizos

0900 – 1030: 2.1: IGS Services and Other Initiatives

Presenter – Ms Ruth Neilan

Session Outline: Overview on how these services and other initiatives contribute to global reference systems; regional and national reference systems; organisational benefits; and how do agencies participate i.e. requirements.

1030 – 1100 Session 2.2: Gravity and WHS

Presenter – Dr Dan Roman

Session Outline: Gravity and the WHS: The gravity field is directly related to the structure of the Earth and how its mass is distributed. Every piece of mass creates a potential of gravity (geopotential) that drops off with distance. The cumulative effect of all these produces the Earth's gravity field. This session will focus on the relationship between various aspects of the Earth's gravity field such as the geoid, geopotentials, gravity, deflections of the vertical, and physical heights (e.g., above mean sea level). It covers different means of observing the gravity field and how they are combined to produce models for height determination both at global scales, such as the World Height System, and locally for National Vertical Datums.

1100 – 1130 Morning Tea and networking with Young Surveyors / Professionals

Restaurant, Cassa Geometri – Sponsored by Cassa Geometri

1130 – 1230 Continuation of Session 2.2: Gravity and WHS

1230 – 1300 Session 2.3: Multi GNSS Environment

Presenters – Ms Sharafat Gadimova, Dr Lawrence Lau, and Mr Larry Hothem

Session Outline: Overview of the ICG work plan, its activities, and the Providers Forum. There will also be presentations on the 'state of play' and 'emerging issues' relating to a multi GNSS environment. This includes information relating to signals, augmentation and space; the technical effects of a multi GNSS environment on reference frame infrastructure, positioning applications and techniques.

1300 – 1400 Lunch

Restaurant, Cassa Geometri – *Sponsored by Cassa Geometri*

1400 – 1500 Continuation of Session 2.3: Multi GNSS Environment

1500 – 1600 Session 2.4 Standards and Traceability of a Terrestrial Reference Frame / GNSS

Presenters – Dr David Martin and Mr Larry Hothem

Session Outline: An overview of standards, best practice and traceability will be provided with respect to reference frames, GNSS measurements, GUM, the ISO 9000 series of standards, the ISO 17123 series and TC211. It also includes the status of Geodetic Network Registry.

1600 – 1630 Afternoon Tea and networking with Young Professionals

Restaurant, Cassa Geometri – *Sponsored by Cassa Geometri*

1630 – 1800 Session 2.5: Four dimensional deformation models for Terrestrial Reference Frames

Presenters – Mr Graeme Blick and Mr Richard Stanaway

Session Outline: The presentation will examine the concepts of 4 Dimensional datums; the pros and cons of static, semi-dynamic datum and dynamic datums; and the development of Deformation Models which incorporate the effects of events such as earthquakes. This information will be explained through case studies from Australia and New Zealand.

1800 Closing Remarks and Presentations – Prof Chris Rizos and Mr Graeme Blick

2000 – 2300 Seminar Dinner in conjunction the Young Surveyors Conference

Da Meo Patacca Restaurant, Piazza dei Mercanti 30, Trastevere, Rome

<http://www.ristorantedameopatacca.com/index.php?lang=en>

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The Organisers IAG, FIG and ICG would like to thank and acknowledge the following sponsors for their support of this inaugural event.



NOTES for Participants

Registration to this event will be in the same venue / building as the Reference Frame in Practice Seminar and also the Young Surveyors Conference.

It is recommended that you allow enough time to register prior to the commencement of the Reference Frame in Practice Seminar which starts at 0850 on Friday 4th May 2012.

The scheduled morning teas, afternoon teas, lunches and dinners will be held in conjunction with the Young Surveyors Conference and at the same locations.

Map of venue location labelled “A” in the map below - Cassa Geometri, Address - 4 Lungo Tevere Arnaldo Da Brescia, I-00196, Roma.



Public transport passing near the Cassa Geometri:

- Subway line to stop "Flaminio"
- Railway line Rome - Viterbo Flaminio stop Piazza del Popolo
- Bus: 88 to 95 - 490 - 491 to 495 - 628 - 926 - c3
- Piazzale Flaminio tram line 2