

## **DIVISION X / COMMISSION 40 / WORKING GROUP GLOBAL VERY LONG BASELINE INTERFEROMETRY**

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**PAST CHAIR**

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### **TRIENNIAL REPORT 2006 - 2009**

#### **1. Introduction**

This triennium began with an action to re-create the Terms of Reference for the Working Group Global VLBI (WG-GV). These had been lost over the years since the Group was established in 1990. Fortunately, the personal archive of one long-term member yielded a copy of the original memorandum by R. D. Ekers, which was found to coincide quite well with current practice and areas of interest. New Terms of Reference, based on modern conditions, were drafted and accepted by both IAU and URSI.

#### **2. Terms of Reference, d.d. 12 December 2006**

The WG-GV was established in 1990 as a Working Group of Commission J at the URSI General Assembly in Prague, and recognized in 1991 at the IAU General Assembly in Buenos Aires as a Division X Working Group. The mandate of the WG-GV, its membership and chair, are reviewed at Commission J business sessions during URSI General Assemblies. The current mandate of the WG-GV comprises the following tasks: 1. To develop a concept for an International VLBI Network, comprising existing or future national and regional networks. 2. To promote compatibility of technology in VLBI instrumentation. 3. To serve as a liaison between ground-based observatories and national or international space agencies, for coordination of participation by ground radio telescopes in Space VLBI missions. The WG-GV carries out its tasks in conjunction with the organizations concerned, and presents summaries of its activities to URSI Commission J and IAU Division X at their respective General Assemblies. The current chair of the WG-GV is Jonathan Romney (NRAO, USA); membership is being updated.

#### **3. Membership**

Simultaneously, WG-GV membership was renewed through a poll of all previous members, who were asked either to confirm their continued membership or to propose replacements. The new membership was selected with an eye toward balanced representation in both a geographic sense, and in terms of expertise. Geographic balance was based on three longitude regions: Asia & Australia, Europe & Africa, and the Americas. Expertise available among current WG-GV members spans areas including scientific studies

in astrophysics, astrometry, and geodesy; and techniques including e-VLBI and Space VLBI.

#### 4. Working Group meetings

The WG-GV did not meet as a group during the 2006 IAU XXVI General Assembly, because the chair was not able to travel to that meeting. The WG met during the recent URSI General Assembly, held 7-16 August 2008 in Chicago, (IL, USA). Unfortunately, however, that meeting had to be held during a 'splinter meeting' session on the final day of the GA, when a number of members were not able to attend. It is not clear whether the past practice of holding WG-GV meetings during the General Assemblies of these international unions remains tenable, but other options are also problematic. The diversity of interests among the membership, and the graduation of VLBI beyond the specialized-technique category for which periodic international 'VLBI meetings' were appropriate, make it difficult to identify other venues at which a reasonable fraction of members can attend.

#### 5. Basic tasks

Among the three basic tasks specified in the WG-GV's Terms of Reference, work was concentrated in the Space VLBI area during this triennium, in preliminary work related to the VSOP-2 mission. This effort was carried out by the chair individually at this early stage. Guidance, developed in consultation with the chair of URSI Commission J (who is a past chair of WG-GV), was provided to the mission in two areas: on compiling a suitable list of ground radio telescopes (GRTs) whose participation would be valuable to the mission; and on issuing invitations to the institutions operating those telescopes. As of this date, a substantial list of suitable GRTs exists, but the invitations have not yet been issued by the mission.

The chair was appointed, on an ex-officio basis, as a member of the VISC-2 mission advisory committee, and participated in that group's first face-to-face meeting on 13 May 2008 in Bonn, Germany, in a limited meeting during the recent URSI GA, and in a number of VISC-2 teleconferences.

The WG-GV's role in the VSOP-2 mission has been called into question recently by two major potential GRT networks. The European VLBI Network, principally, has expressed a strong preference to negotiate and schedule their participation bilaterally with the VSOP-2 mission. And, with NASA having decided not to fund the 'Samurai' proposal for US VSOP-2 mission support, the participation of the VLBA and other instruments of the US National Radio Astronomy Observatory will also have to be negotiated directly with the mission, on the basis of whatever funding arrangement may be developed. The mission itself strongly favors GRT coordination through the WG-GV. An overall resolution of this issue will have to be a major focus for the WG in the coming years.

#### 6. The chair

The chair tendered his resignation to the president of IAU Division X and the chair of URSI Commission J, effective as of the end of the URSI GA. Selection of a successor chair is still under way. Therefore, this report covers only the approximately two-year subset of the triennium to date. Future directions will be determined by the new chair.

Jonathan D. Romney  
*chair of the Working Group*