

# TIMING INTEROPERABILITY



# Interoperability & Service Standards

## Timing

ACTIONS FROM ICG-14	STATUS
<b>Continue investigating GNSS time interoperability issues and share the results on GNSS time interoperability and time transfer issues</b>	<b><i>TBD</i></b>
<b>Consult with IGMA Task Force on including GNSS-GNSS time offset monitoring under the ICG/IGS Trial Project</b>	<b><i>Complete – not feasible at the present time</i></b>
<b>Conduct another Timing Interoperability Workshop with a focus on receiving feedback from users and manufacturers of timing receivers</b>	<b><i>TBD – should be considered by WG-S, WG-B and WG-D</i></b>



# Agenda Items for Next Workshop

- Further consider the ESA and BIPM presentations made during ICG-14
- Consider the input of manufacturers/users on techniques to address multi-GNSS timing interoperability:
  1. As **direct offset** between one System's time scale vs. another System's time scale (GNSS-to-GNSS Time Offset, GGTO) **broadcast** in the navigation message
  2. Using the **UTC information** broadcast in the navigation message of all GNSS as a **pivot** to obtain the time offset of one System's time scale vs. another System's time scale
  3. **Estimating** the respective GNSS-to-GNSS Time Offset directly in the **GNSS user terminal** as part of the position estimation process when enough satellite measurements are available
- Determine whether consensus can be reached on any recommendation for time offsets

