



Key Definitions for GNSS Service Performance Commitments

ICG Working Group A

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Background

US briefed and requested feedback at Mar 2009 ICG WG-A:

1. Proposed New ICG Principle

Every GNSS provider should establish documented civil performance [standards] [commitments] to inform users about minimum levels of service

2. GNSS Providers' Template for Performance Commitments

Create a template (as a cooperative ICG WG-A effort) that GNSS Providers could use on a voluntary basis when writing their own performance commitments

[intended to increase standardization & interoperability]

3. Performance Commitment Parameters

Determine which parameters are “essential” or “desired” performance commitments



Purpose and Overall Approach

- This briefing introduces a draft list of key terminology in support of ongoing ICG Performance Commitment efforts
- Overall approach
 - Adopt new ICG Principle at ICG4 (Sep 2009)
 - *“Every GNSS provider should establish documented civil performance commitments to inform users about minimum levels of service”*
 - In parallel, continue to develop a GNSS Providers’ Template for Performance Commitments
 - Supported by a common set of key terminology



Template Plan

1. Develop common terminology

- To be used amongst GNSS providers when creating the ICG Template for GNSS Performance Commitments
- Scope of terminology specific to GNSS performance commitments (i.e., NOT an effort to develop a comprehensive GNSS glossary)
- Focus on key terms that need to be agreed on and which have a potential for differing definitions
- Initial draft is now available for review & discussion

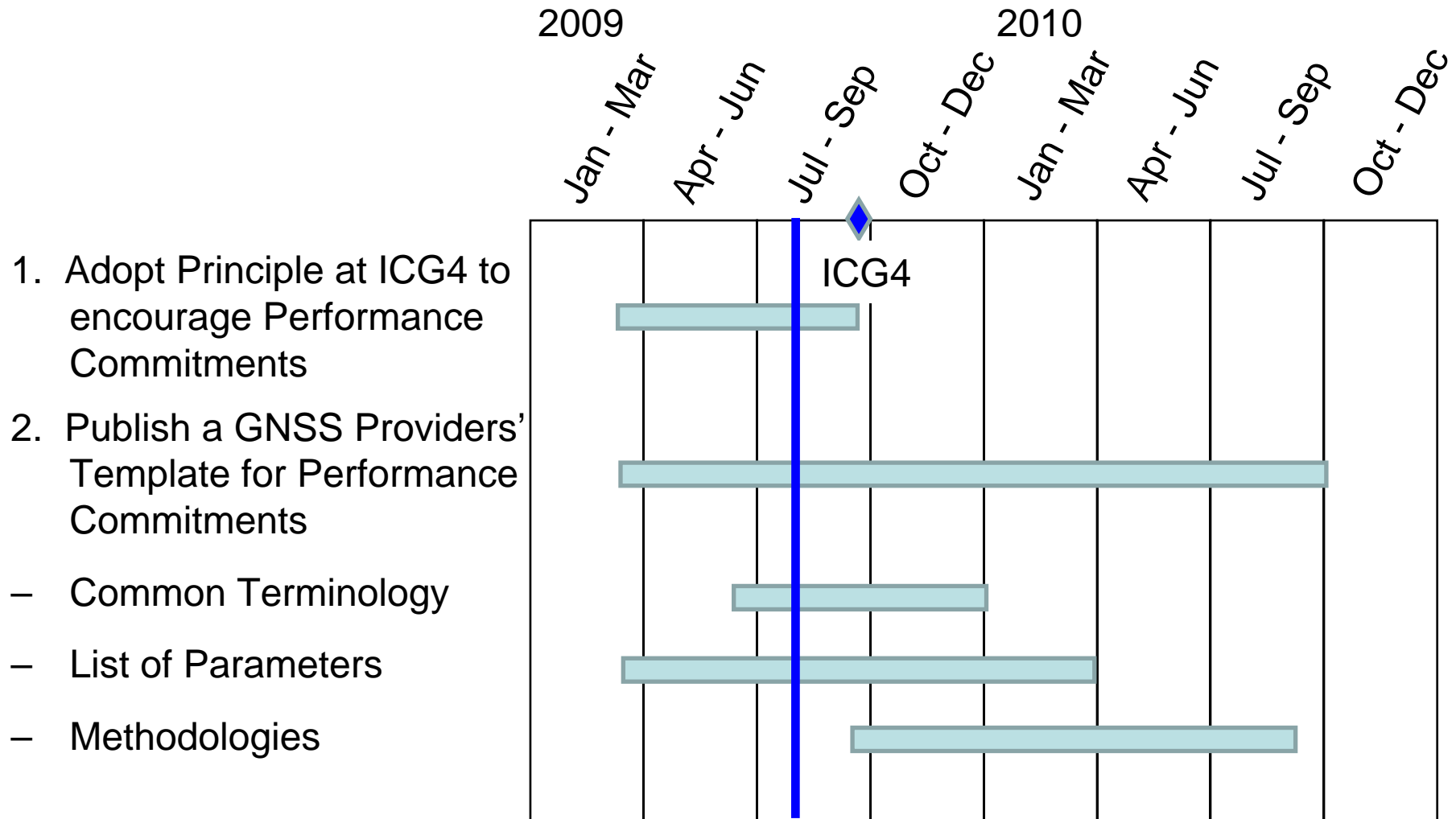


Template Plan (cont)

2. Develop list of parameters to be included in Template
 - Continue review and refinement of existing list presented to ICG WG workshop in March 2009
 - Distinguish between *essential* and *desired* parameters
3. Develop methodology for each parameter
 - Document the components to be addressed for each parameter (i.e., those conceptual contributions necessary to define the parameter)
 - Allocation of contributing errors (i.e. resolve potential discrepancies between space & control versus user segments)
 - Determine whether to use a preferred convention



Notional Timeline





For Discussion

- Please refer to handout for draft list of key terminology (version 1.0)
- Increased participation from ICG members and providers is desired as this activity continues
- Feedback & suggestions can be sent to:

Mr. David Steare

c/o GPS Cell

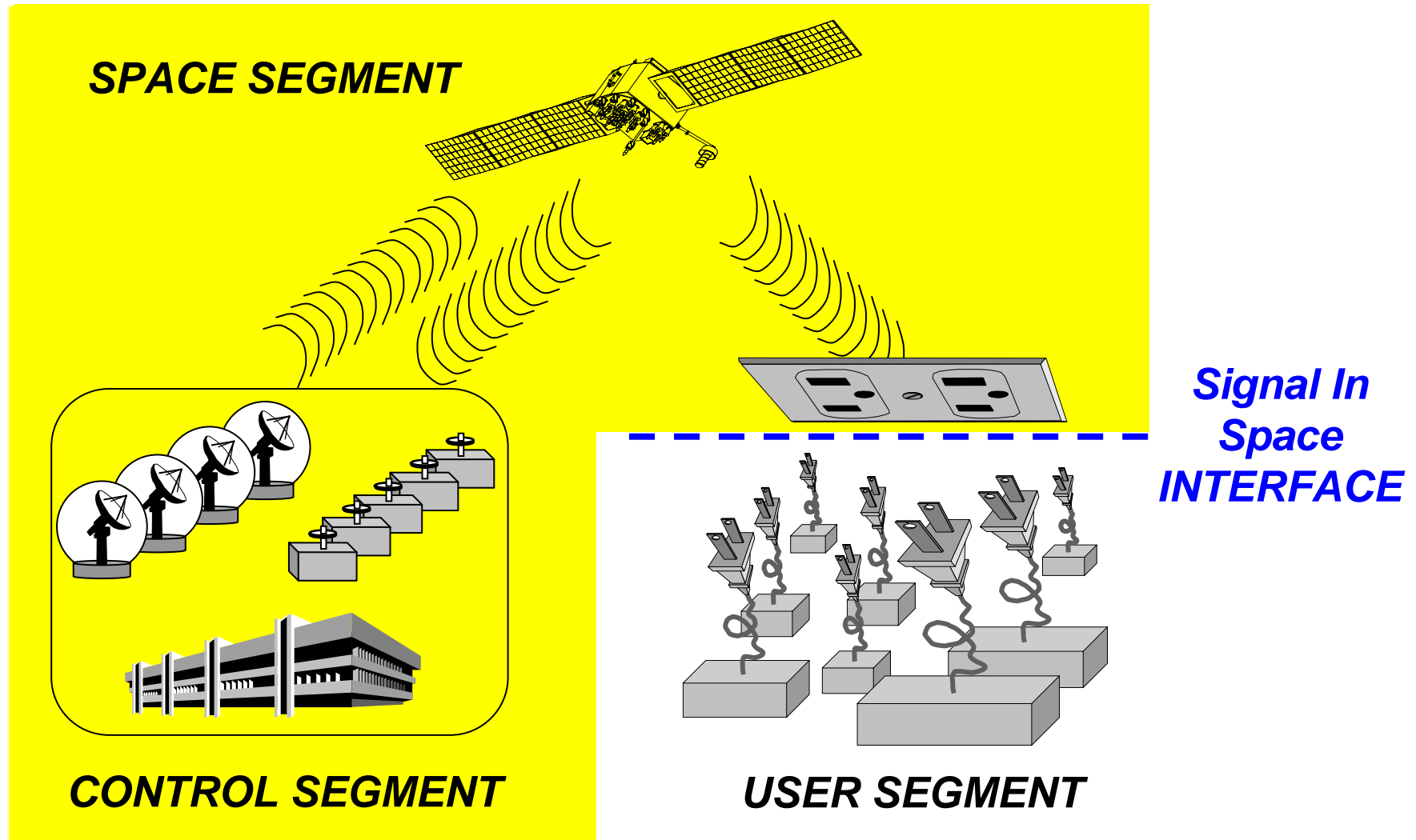
GNSSPCTemplate@gmail.com



BACKUP CHARTS



Line of Demarcation





Performance Commitment Parameters

- I. SIS Constellation Definition
 - Reference Orbital Slot Parameters
- II. SIS Coverage and Minimum Received Power
 - Minimum Received Power
 - 3-Dimensional Service Volume
- III. SIS Accuracy
 - URE
 - URE Derivatives (i.e. rate and acceleration error)
 - Timing Error



Performance Commitment Parameters (cont)

IV. SIS Integrity

- Instantaneous URE Integrity (i.e., probability of SIS URE exceeding a specified Not to Exceed)
- Instantaneous Timing Error Integrity

V. SIS Continuity

- Probability of an Unscheduled Failure Interruption
- Timeliness of Notice Advisories for both Scheduled and Unscheduled Interruptions

VI. SIS Availability

- Per-Slot Availability
- Constellation-level Availability*

*Desired/Beneficial Parameter