

# LMAP BoF: Large-scale Measurement of Broadband Performance

BoF Co-Chairs: Dan Romascanu and Al Morton

March 13, 2012, 1510 - 1710

<http://trac.tools.ietf.org/bof/trac/#OperationsandManagement>

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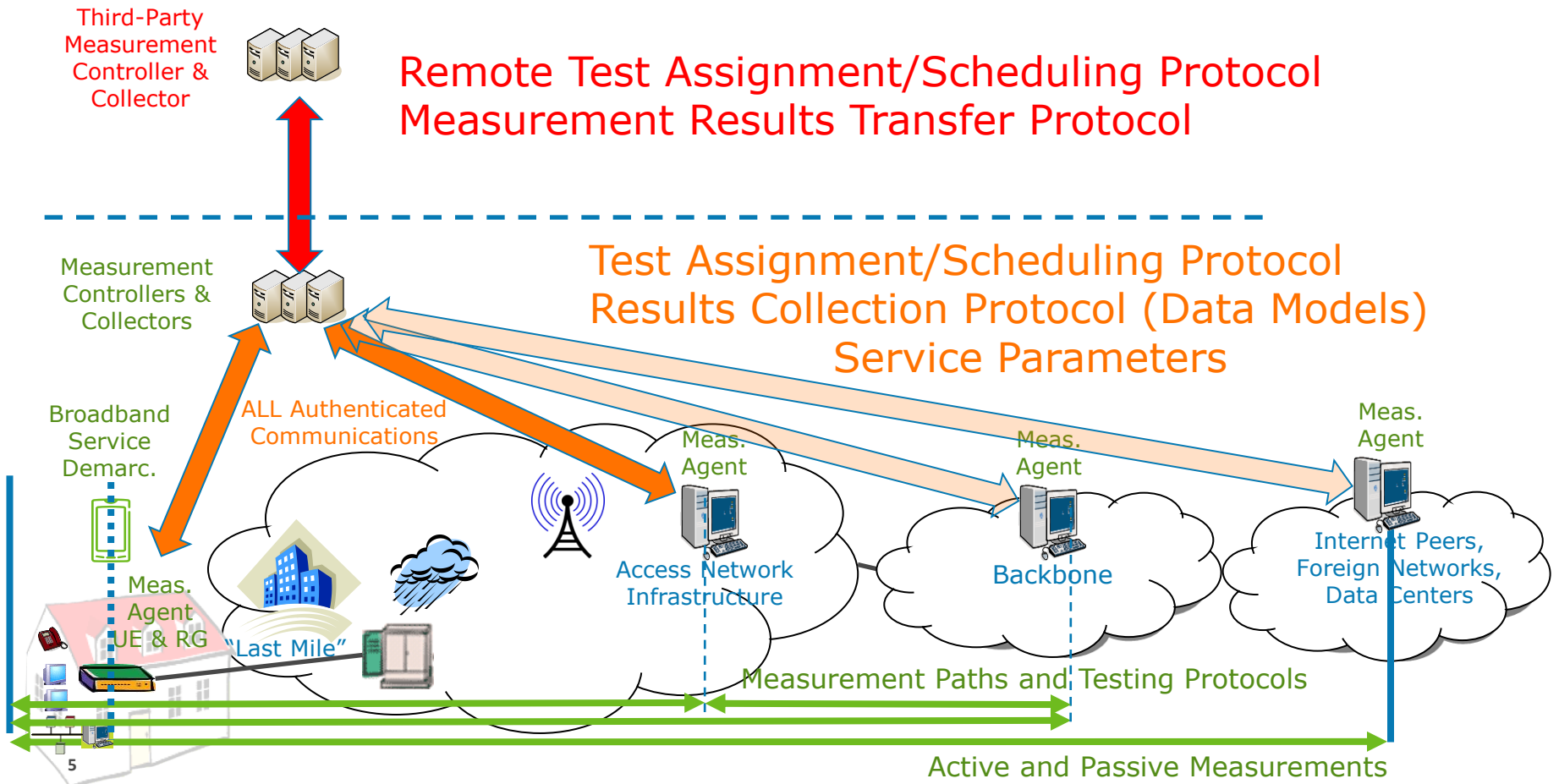
# Agenda

1. Note Well, scribes, IPR, agenda bashing - 5 min
2. Framing the Topic, chairs - Al Morton, Dan Romascanu - 10 min
  - scope of bof presentations, dependencies & coordination
3. General Use Cases - Marc Linsner - 10 min
4. ISP Use case & Framework: Problem Statement, Gaps, Requirements - Phil Eardley - 15 min
5. Foundation Blocks - Marcelo Bagnulo - 10 min
  - 5a. IPPM Registry
  - 5b. Reference Path & Measurement Points
6. Solution Candidates - 30 min total
  - 6a. IPFIX - Brian Trammell - 10+ min
  - 6b. NETCONF/YANG - Juergen Schoenwaelder - 10+ min
  - 6c. ALTO - Jan Seedorf - 5+ min
7. Scope Discussion - 10 min
8. LMAP Charter Discussion - 20 min
9. BOF Questions - 5 min

# Framing Today's Discussion

- Measuring broadband service on a large scale requires
  - selection and standardization of protocol(s) within a logical architecture, through
  - development of key protocol requirements to coordinate specific interactions between the system components, and
  - many other agreements and standards (dependencies)
- Draft-schulzrinne-Imap-requirements-00 started IETF discussions: BoF Proposal and Charter seek simplifications
- BoF Presentations follow key assumptions:
  - Inclusion of the most demanding case (edge scale and complexity)
  - A single organization operates the measurement system
    - Also, subscriber may initiate their own measurements
  - Measurement functions of a device have a single controller association at any point in time.
  - Once tasked, measurement functions operate autonomously.
  - Policy decisions and coordination are out-of-scope

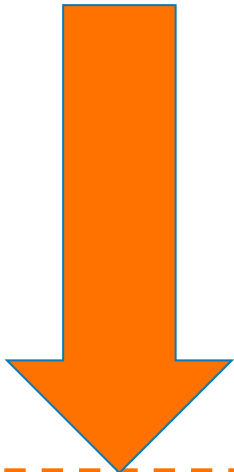
# A View of Future LMAP Architecture (based on Req. from draft-schulzrinne-lmap-requirements-00)



# LMAP BoF/Proposed WG Scope

## BoF Goals:

- sync on problem statement and use cases
- understand what the existing IETF protocols and data models can or can't do for LMAP.
- clarify aspects in-scope or not for LMAP



Control Protocol  
Reporting Protocol + Info/Data Models  
- For Large Scale ~100k

Measurement  
Controllers &  
Collectors



Broadband  
Service  
Demarc.



Meas.  
Agent  
UE & RG



Authenticated  
Communications



Meas.  
Agent

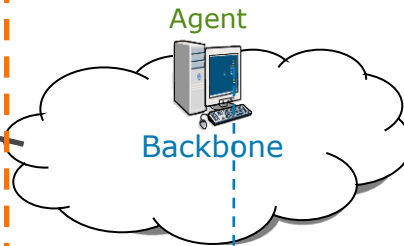
Access Network  
Infrastructure



Measurement Paths and Testing Protocols

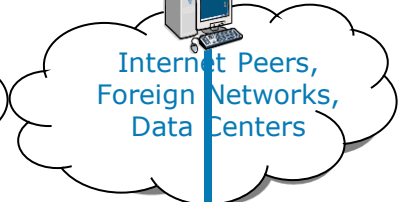
Meas.  
Agent

Backbone



Meas.  
Agent

Internet Peers,  
Foreign Networks,  
Data Centers

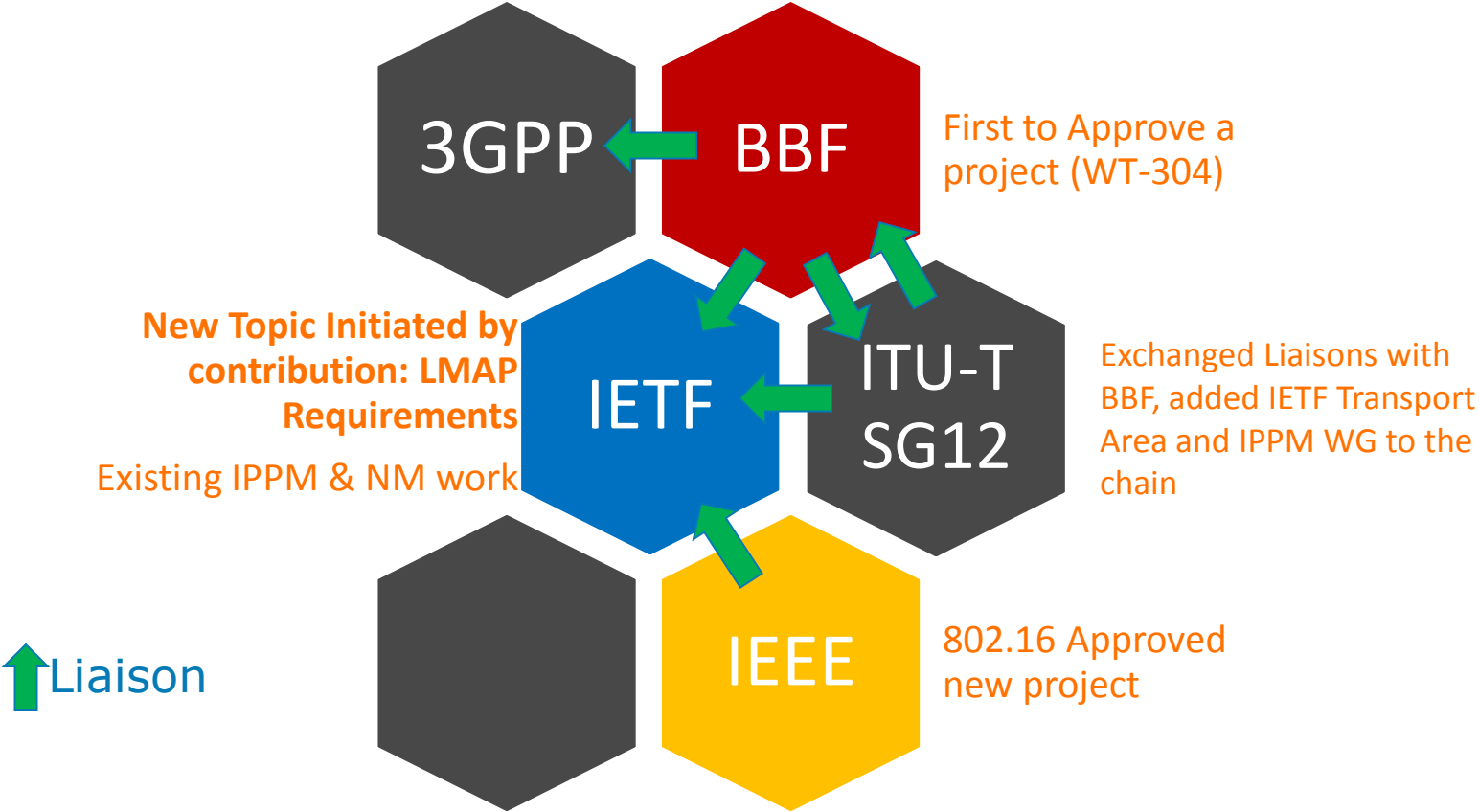


Active and Passive Measurements

# Dependencies

- IPPM WG (possibly re-chartered)
  - Existing Metrics and Methods of Measurement
  - New Metrics & Methods
  - Summarization (Statistics)
  - MA-MA measurement protocols (new features)
  - New Metric Registry (more details to follow)
- Coordination
  - Internal (other IETF WGs)
  - External (other SDOs and bodies)

# LMAP Standards Initiative: Liaison Activity FYI (not discussed today)





# Charter Points

We have a charter proposal submitted for BOF approval

- <http://trac.tools.ietf.org/bof/trac/#>
- Good enough for that phase, will need to be refined as part of WG formation
  - Several phases will follow: submit charter, IESG Internal Review, IETF External Review

So we won't edit text in the BOF but we know the wording in the charter should be further refined to include:

- Scope definition in a phased approach
  - Two use cases to start with (large operator, operator-3<sup>rd</sup> party)
  - Extensible Framework
- Goals
  - Framework and Requirements
  - Information Model, Data Model and Control Protocol for communication with Measurement Agents
  - Information Model, Data Model and Protocol for reports and secure delivery
  - Protocol Independent Registry for Metrics (probably in IPPM)
- Deliverables and Timelines
- Relation with other IETF WGs and other SDOs

# BoF Questions

(additional questions may be asked)

A. Should IETF take-up the work described by the Scope and Problem Statement\*? (yes, no, no opinion)

(\* with possible mods discussed today)

B. Indicate your intent to actively contribute to this work in IETF\*\*.  
(yes, no, no opinion)

(\*\* if taken-up in the approximate form described)

# BACKUP