LMAP Internet Measurement draft-ooki-lmap-internet-measurement-system-02

Motoyuki Ooki, Satoshi Kamei

20th July 2015

Prague, IETF-93

Motivation

- Measure the network performance for End-to-End
  - Original Measurement System
  - Sharing of our current and Japanese status

- Propose extensions for end-to-end to the LMAP WG
  - Discuss some options for the LMAP WG

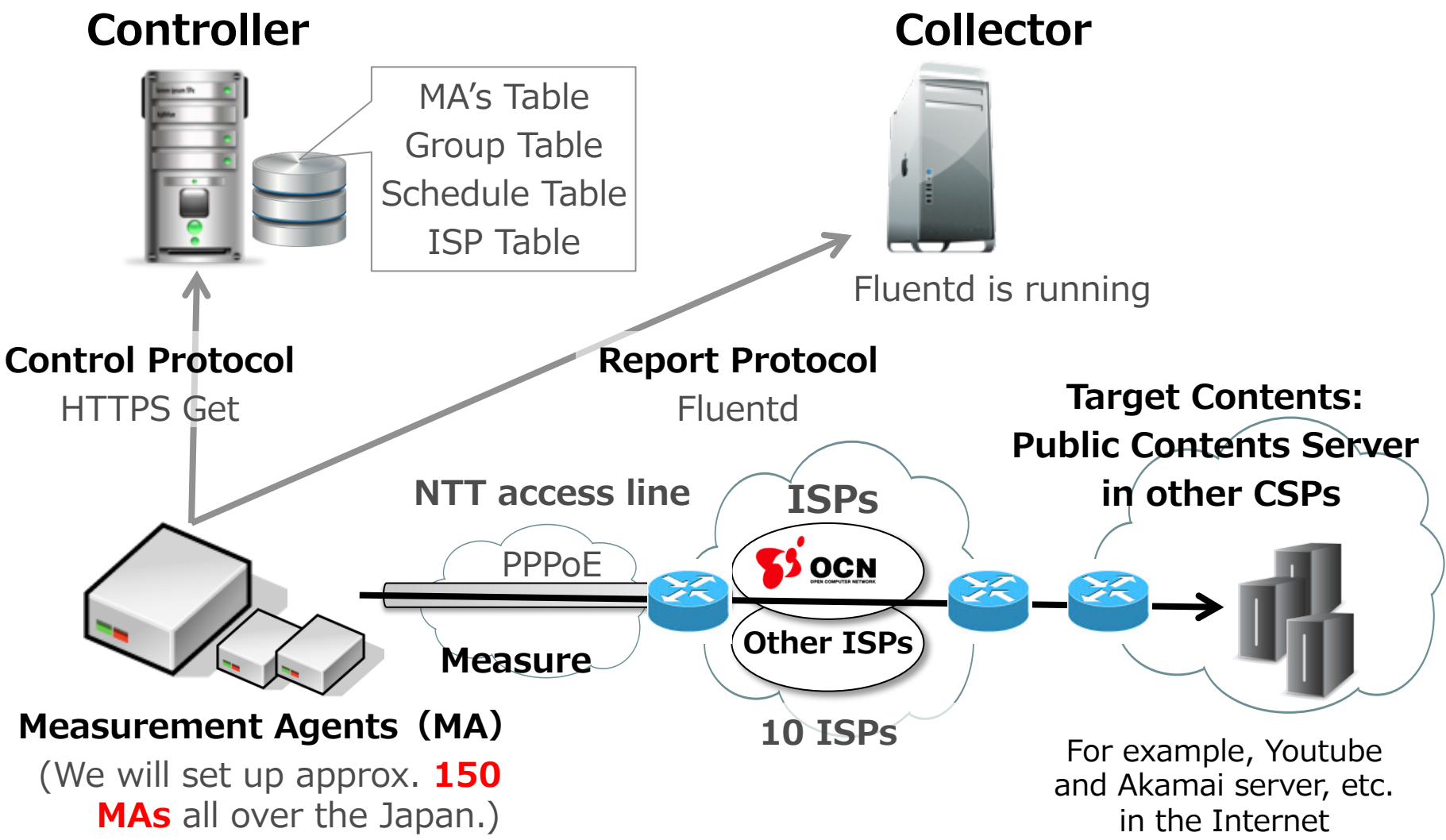
Background

1. Improving customer satisfaction and network operation is our (ISP's) goal.
2. Bigger impact of the CDN's behavior
   - CDN's traffic volume is increasing.
   - The contents are distributed from multiple AS.
3. Publish evaluations of ISPs (e.g. Google / Sandvine)

* The government in Japan standardize the measurement of the mobile network performance.
  - Place / Number / Times for measurement
  - Developing original measurement tools
  - Publish the analysis result using box-plot

Internet Measurement System

The details are described in the -02 version draft.

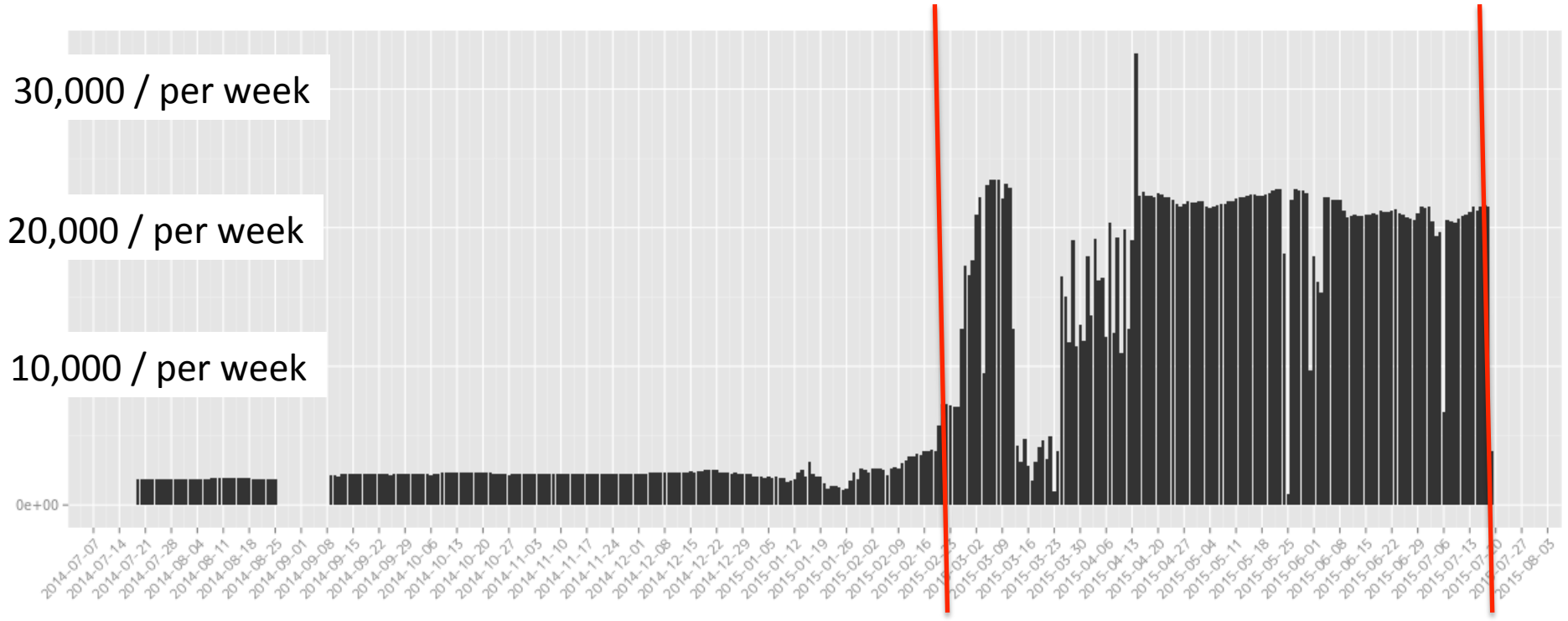


LMAP extensions for End-to-End

- End-to-End measurement **between different AS.**
  - Currently : 1. MA and MP are in the same AS.
  - Next Extensions : 2. MP is in a different AS from MA's AS.
    3. MP may be a public server in other CSP.
- **Data reliability**
  - As many kinds of data as possible to analyze data accurately
  - Original flexible schedule system
    - MAs get a measurement schedule from the Controller autonomously and start measuring continuously.
    - The Controller supplies measurement schedules with high priority.
- **Scalability** of measurement
  - How many MAs can a controller instruct ?
  - Need many MAs to collect more data

Data Reliability

- Changes in the number of measurement for a year



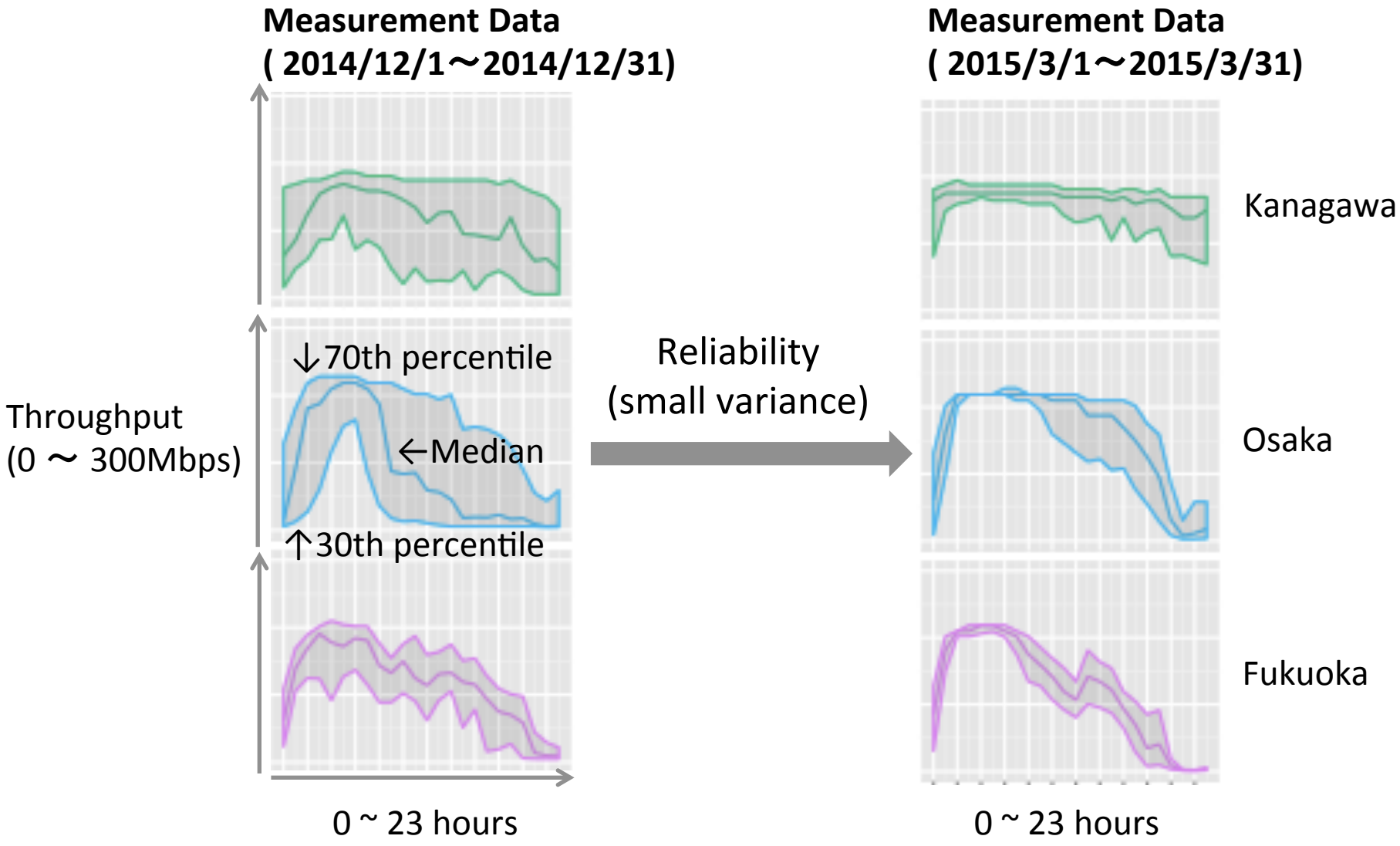
2014/7
Legacy System
- Schedule is based on cron (every 30 minutes).

2015/2
Deploy New System
- Based on LMAP Framework
- Flexible schedule system

2015/7

Data Reliability

- Reliable Evaluation of measurement data



Future Plans and Discussion

- We extend the options for End-to-End measurement for the next step in LMAP WG.
  - Measurement between different AS
  - Architecture to collect more data
  - Scalable system for large measurement

- Other suggestions

Thank you!