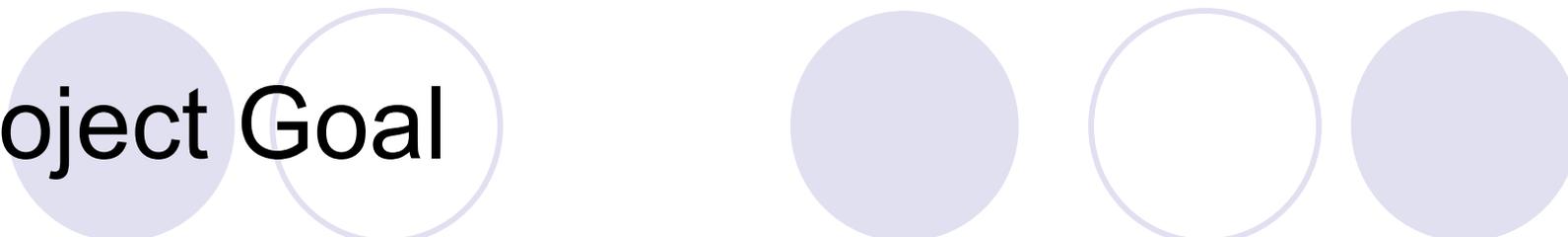




# Gulliver Project

- Distributed Active Measurement  
with Remote Management System -

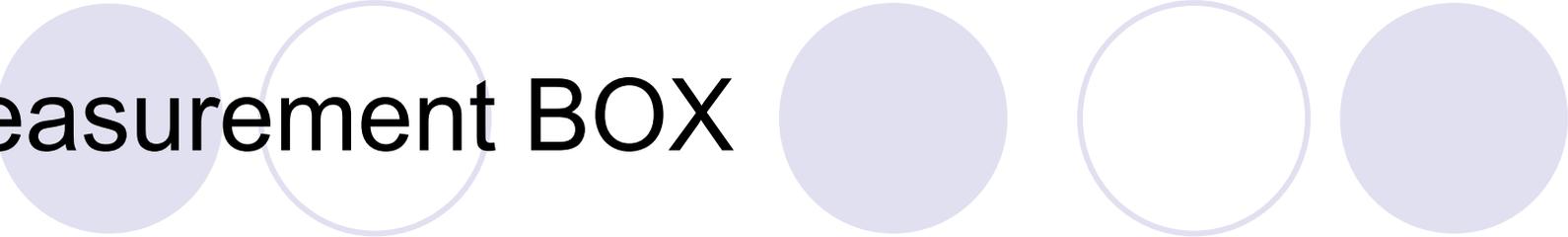
Yuji Sekiya  
Yohei Kuga  
Kenjiro Cho



# Project Goal

- **Distributed Active Measurement**
  - All over the world, more than 50 boxes
  - Using small BOX, not PC
  - Low costs of distribution and deployment
- **Remote Management System**
  - No need of pre-configuration
  - Just plug ethernet cable and power
  - Configuration is downloaded automatically

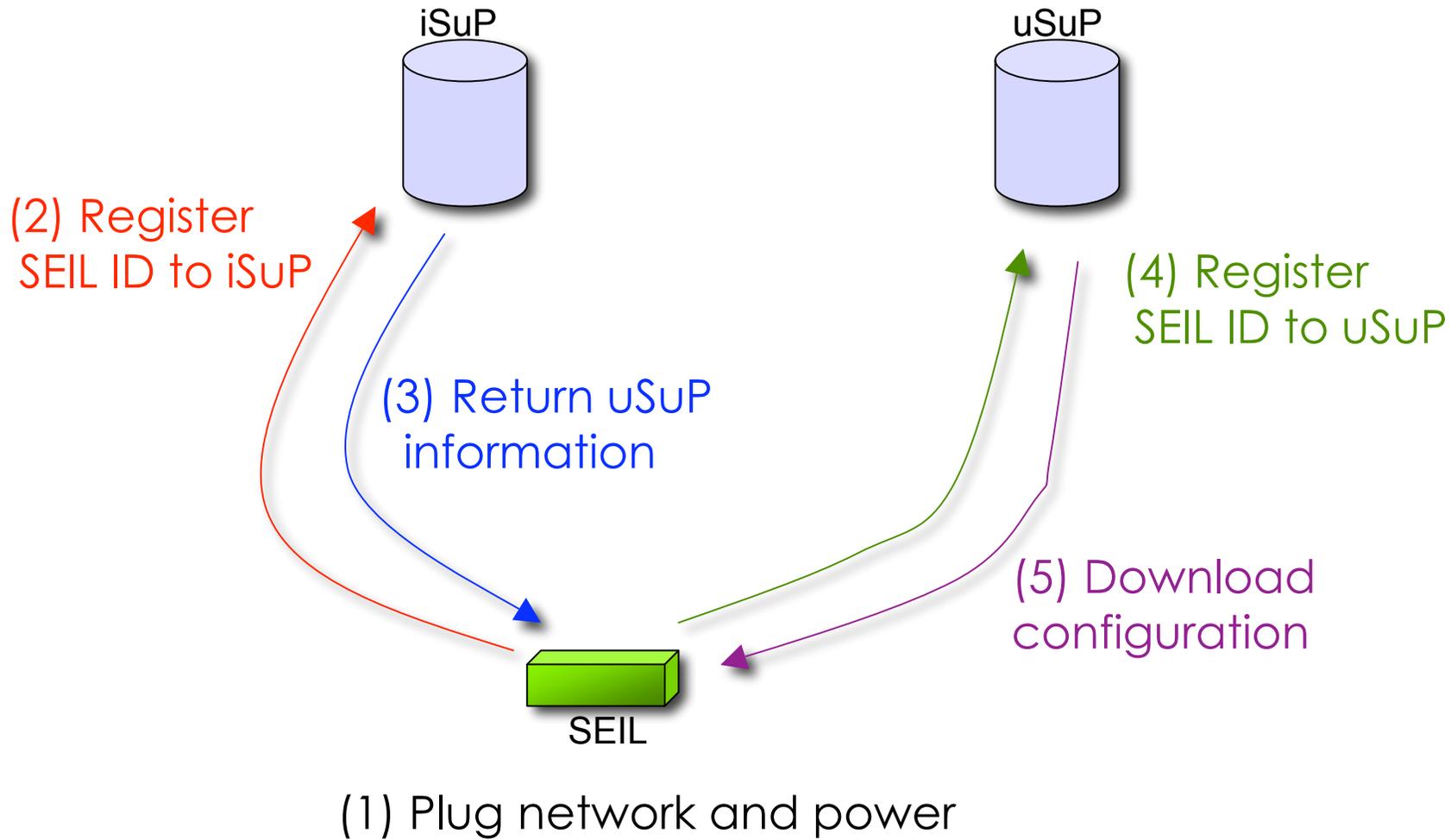
# Measurement BOX



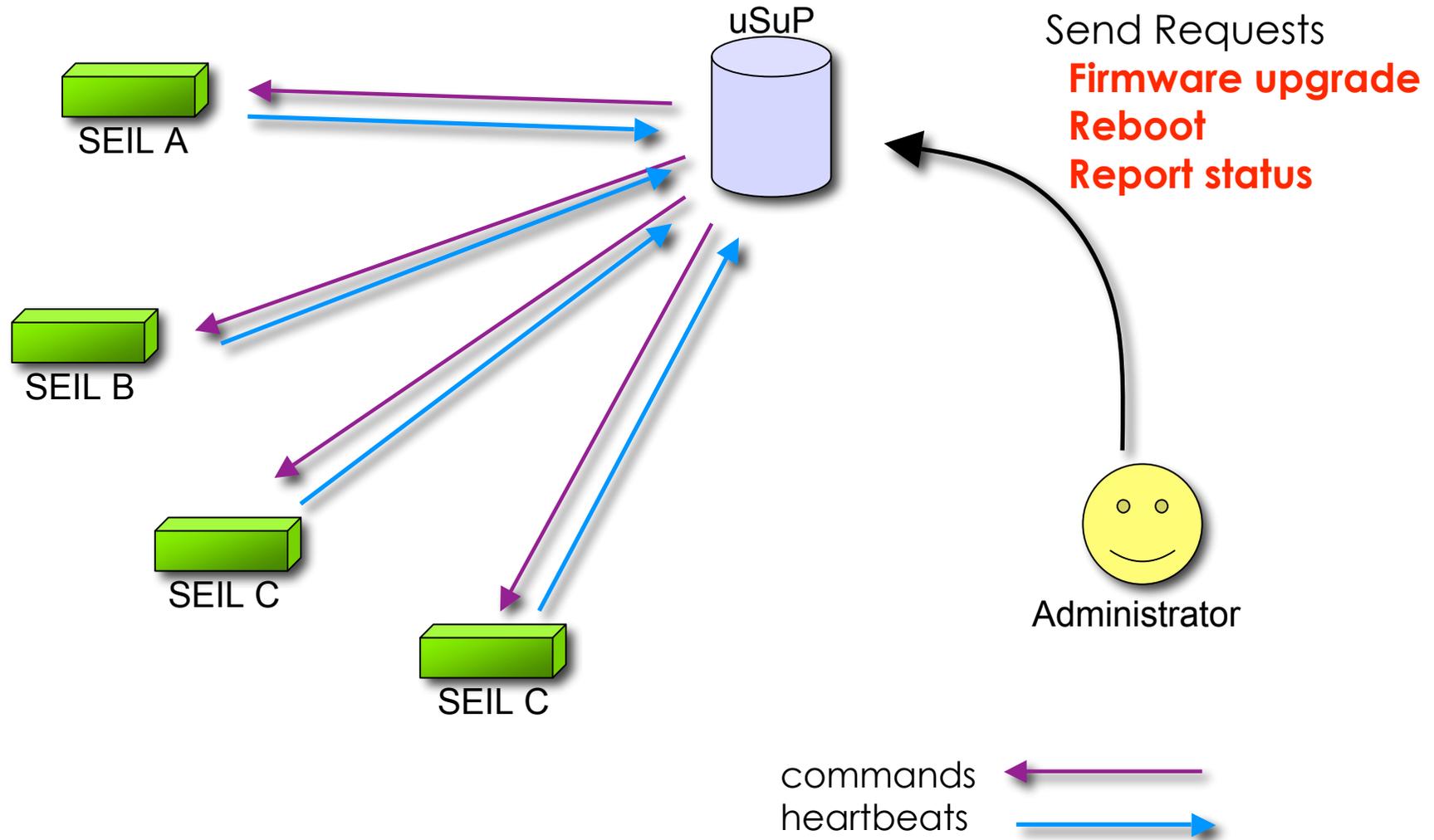
- IIJ SEIL

- Originally it's a small router with IPv6, IPv4 NAT and IPv4/IPv6 Ipsec
- Including SMF(SEIL Management Framework)
- OS: NetBSD
  - No HDD
  - Memory : 64MB
- Long MTBF

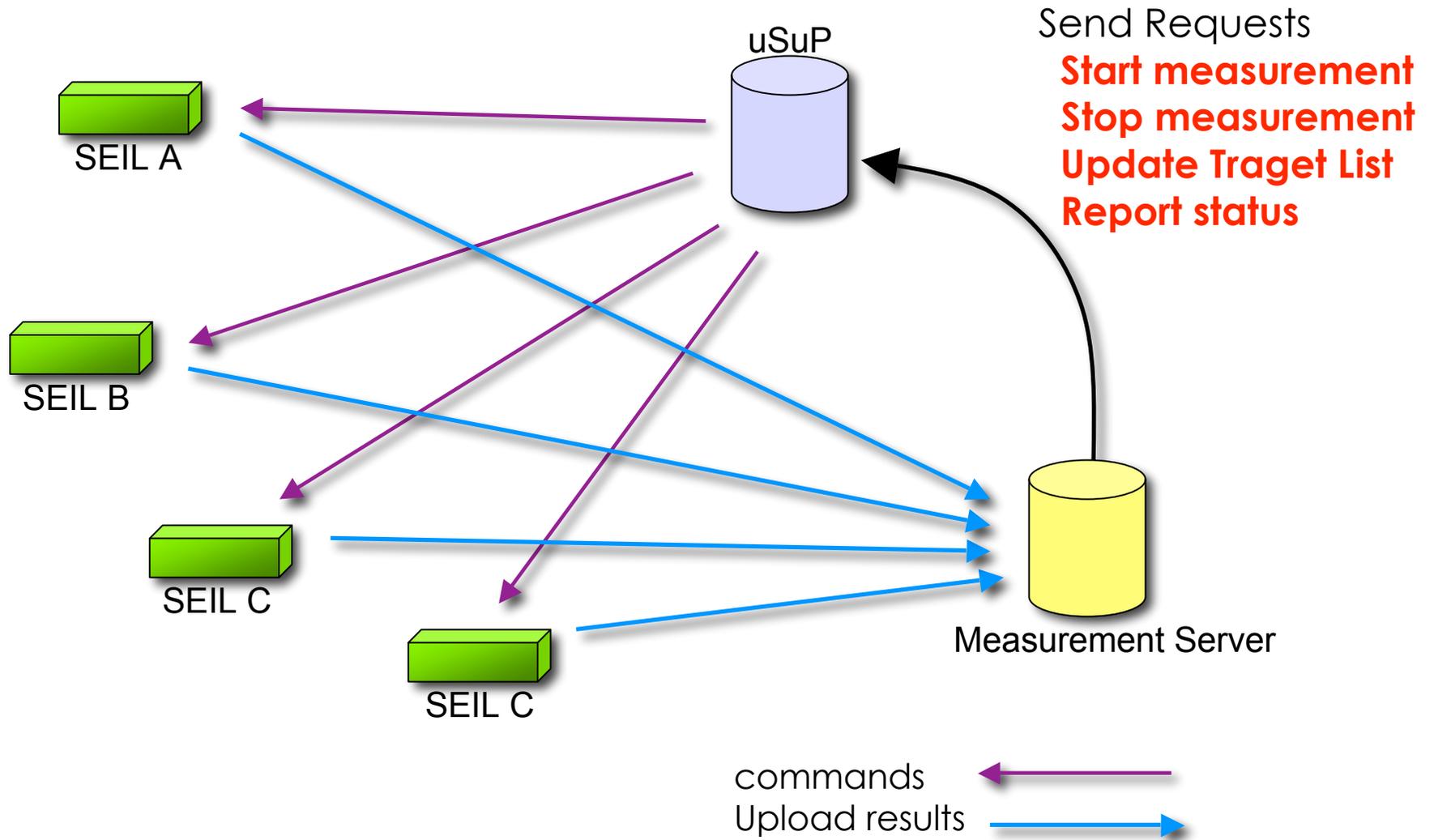
# Overview of System (bootstrap)



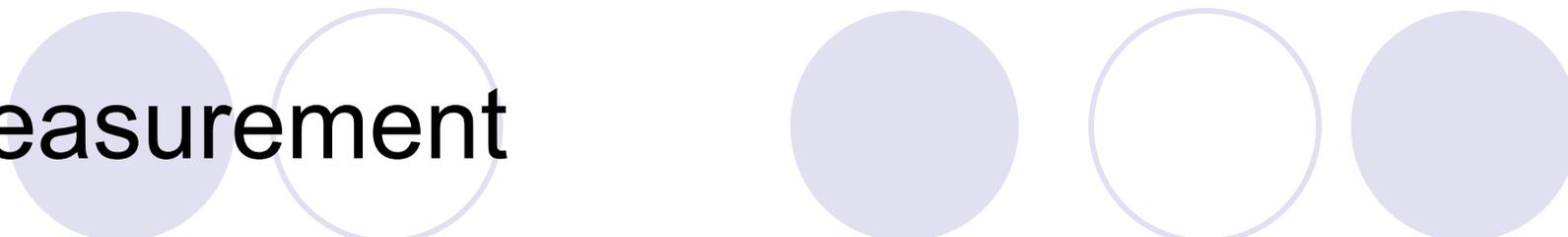
# Overview of System (management)



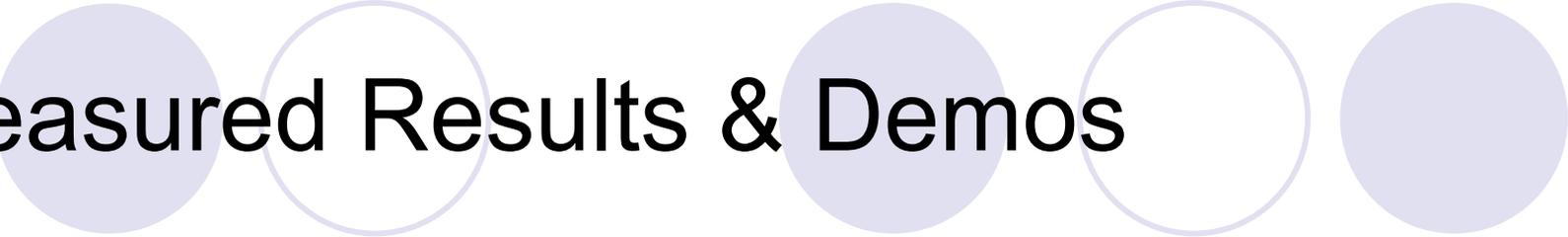
# Overview of System (measurement)



# Measurement

A decorative graphic at the top of the slide consists of two groups of three circles. The left group has a solid light purple circle on the left, a white circle with a light purple outline in the middle, and a solid light purple circle on the right. The right group has a solid light purple circle on the left, a white circle with a light purple outline in the middle, and a solid light purple circle on the right.

- Measurement Box
  - 15boxes are distributed
- Current Measurement
  - rootprobe
    - [A-M].root-servers.net
  - cctldprobe
    - DNS servers of Country Domain
  - arpaprobe
    - DNS servers of [3-239].in-addr.arpa.
- Measured values
  - RTT, Timeout, Anycast ID



# Measured Results & Demos

- Project Web

- <http://gulliver.wide.ad.jp/>

- Member Pages

- We will issue an account to organization which accommodates a measurement box.

- Demo

- Remote measurement

- Web