

- KOREN Update -

TEIN NOC Workshop 2013
2013. 11.27.

KOREN

KOREN Update in 2013

■ Infrastructure status

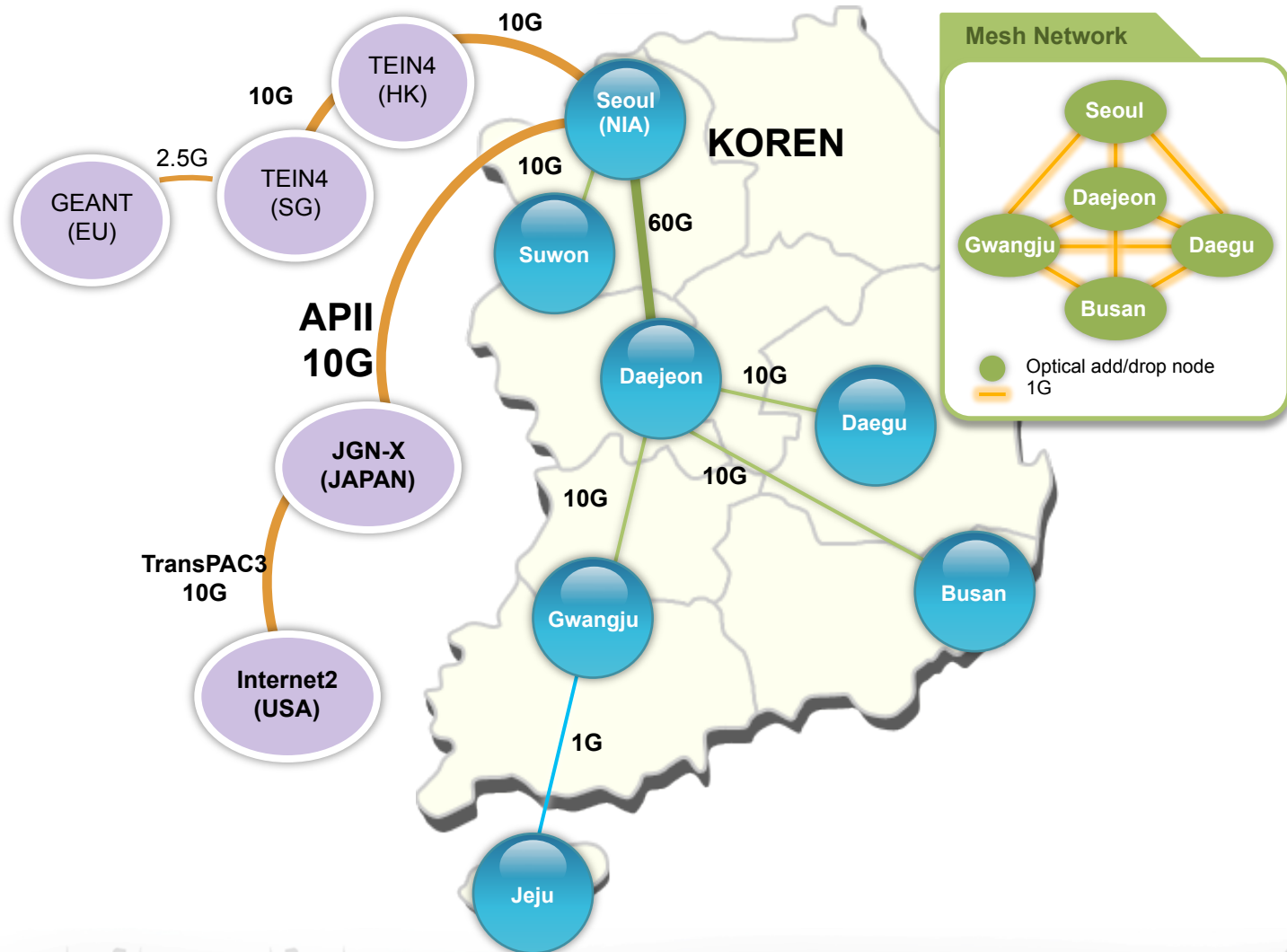
- Up to 60G backbone for testing network equipment capability
 - 10~60G backbone is deployed nationwide (6 Pops)
 - About 60 connections to user site
 - POINTS and other facilities in place for the experiment
 - MPLS-TP & ROADM Integrated System – Multi-layer Optical Network Ctrl Platform
 - Mesh environment (1G) as 1 G separate connection between POPs
- Resources re-location
 - Distributed SDN/Openflow resources was re-located for efficiency .
- Collaborate with Other resources
 - M2M testbed, Cloud nodes, Bigdata facility, Giga internet service infra and etc

■ Projects

- (Awarded) SDN, Open contents , Mobile environment
 - 5 Awarded projects are on-going now
 - Focus on future internet related issues
- (TEIN related) eTEIN KOREN Project
 - SDN, IPTV, Traffic control projects(DPI)

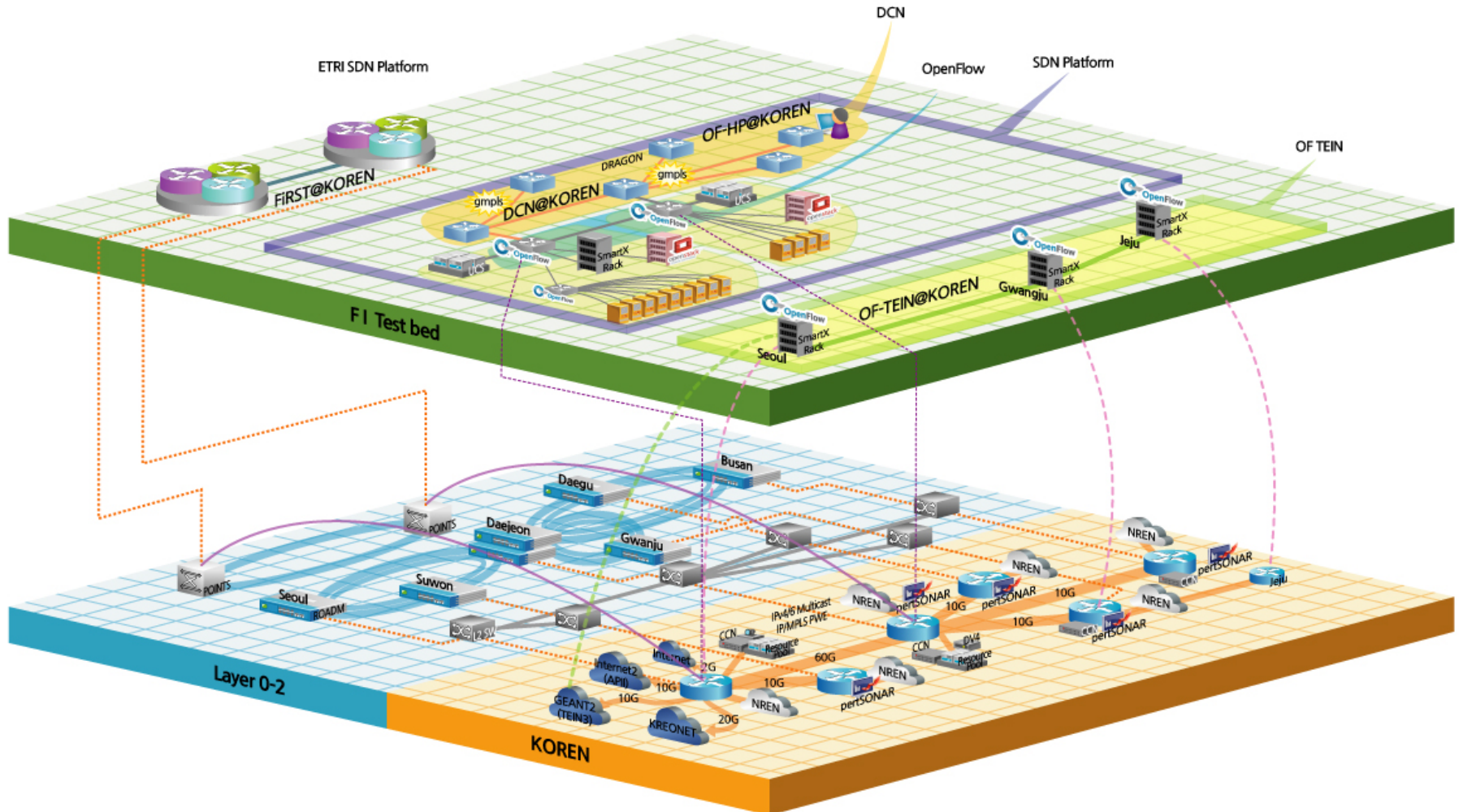


Backbone



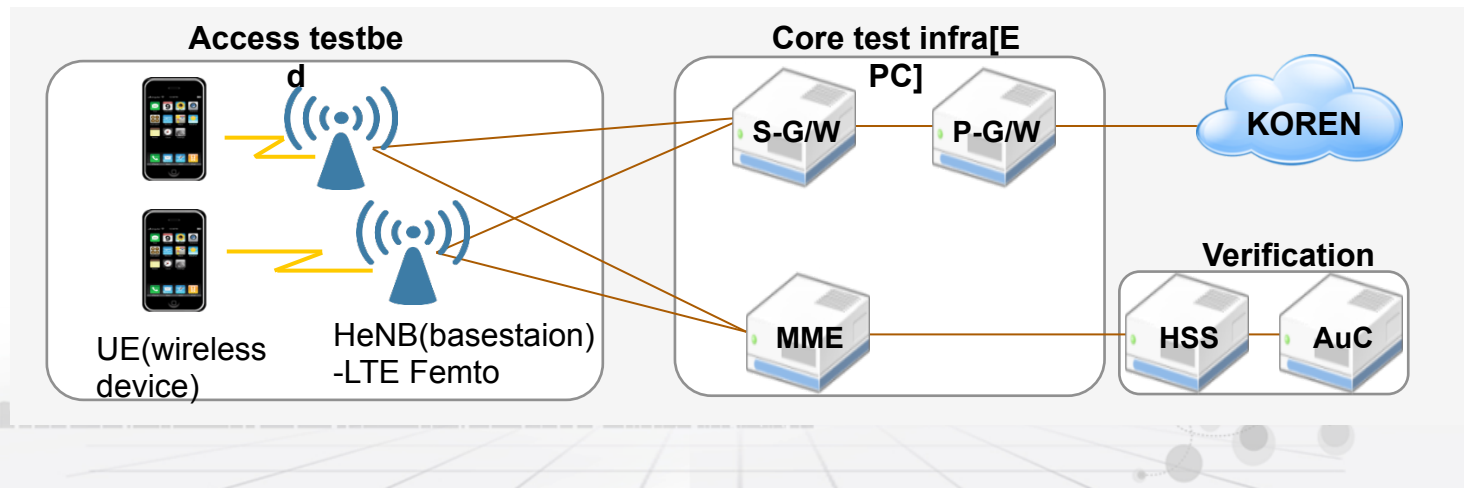
2013. Jan.

FI Testbed in KOREN



KOREN Update in 2013

- **New domestic backbone preparation**
 - Backbone architecture is under planning and discussion
 - Will deploy 100G backbone(Seoul~Daejeon)
 - Centralized resources for better experimental environment and easy to operate and support
- **Additional resource could be added**
 - Mobile research facility would be attached to KOREN
 - LTE related technology will be tested
 - expect to start in top of 2014



Verify R&D results

■ Test & verification Center for next generation network

- Deploy environment testing & verifying research output for advancement of R&D projects
- Locate test environment in KOREN based environment
- Co-work with R&D Projects partners
- Support test of commercial equipment
 - Issue test result report.



■ Activities

- Make test procedure for each candidate project
- Share test equipment with research community(industry, university, and research institutes)



Other Testbeds

■ M2M testbed

- Deploy M2M testbed for pilot service (co-work with KCA)
- Provide testing and developing toolkit and service platform
- Connect with KOREN to M2M support center for testing

■ Cloud environment

- Providing virtual resources to researchers(individual, univ. , industry)
- About 100 computing nodes would connect to KOREN this year and would provide cloud infrastructure and virtual resources

■ BigData analysis platform

- Providing resources which could make Bigdata related technology and service based on public data
- KOREN provide connectivity to someone or company which want to access Bigdata facility.



Projects awarded

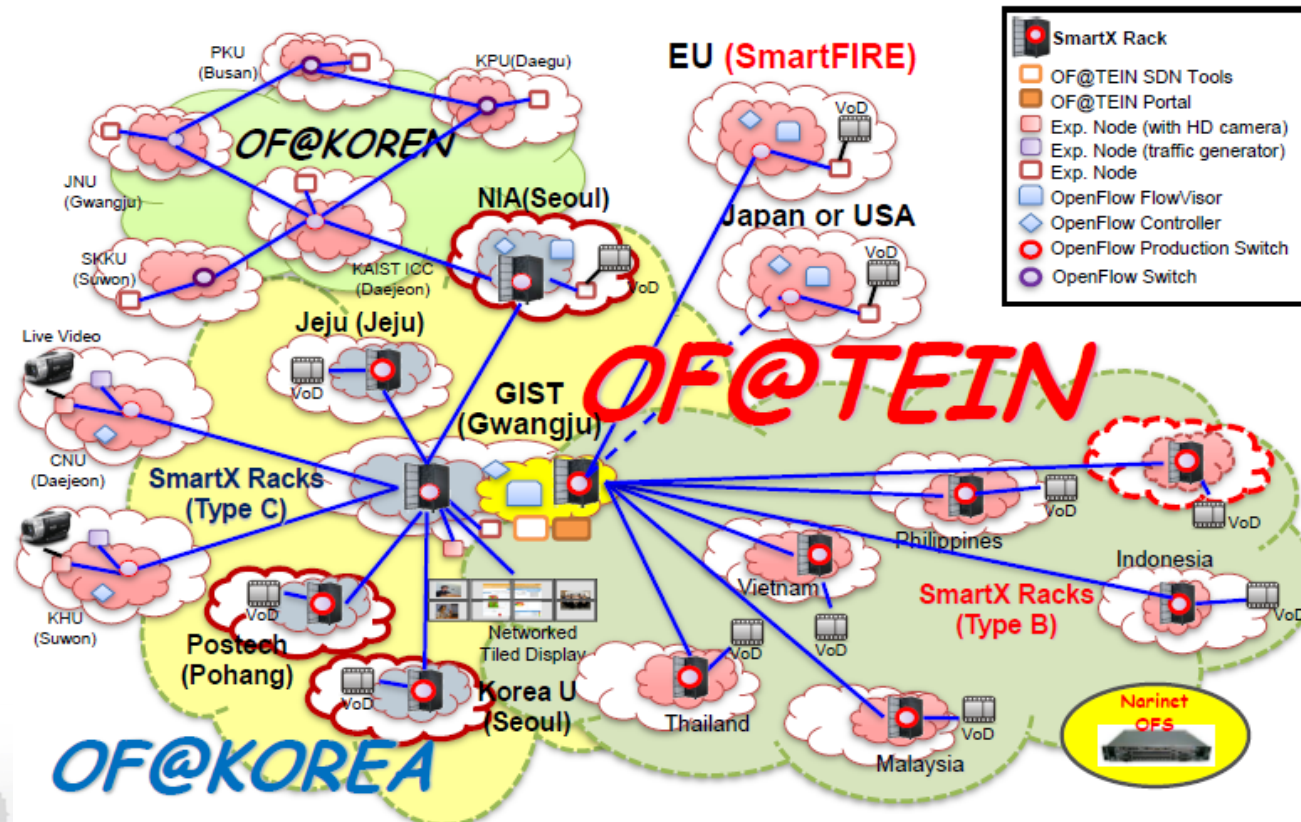
- Research collaboration of practical experiment
 - Expansion and Improvement of Openflow based SDN experimental infrastructure
 - Open Contents transmission testbed
 - Open mobile testbed
- Practical experiment of prototype product
 - Realtime traffic centralized control technology
 - Cloud designated Switch technology



SDN/Openflow R&D

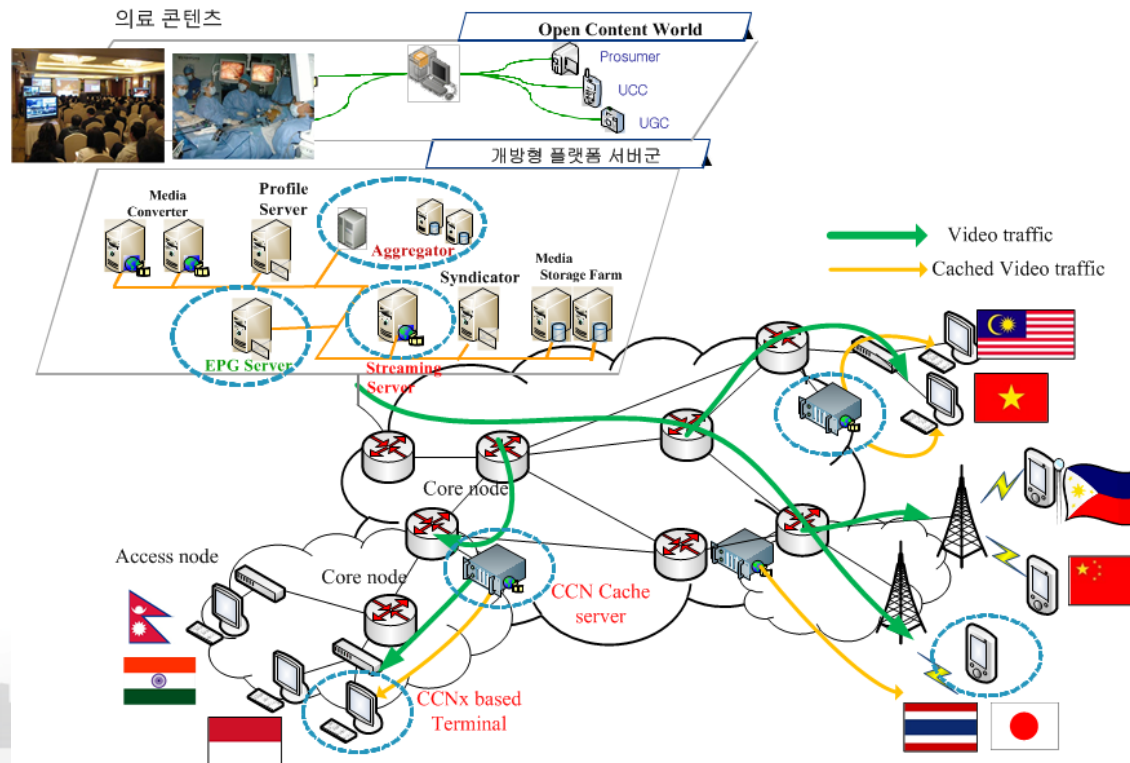
■ OF@TEIN 2013

- OF-based SDN Testing Infrastructure
- Existing SmartX Rack(Type A/B) expansion and operation
- New SmartX Rack(Type C) Design and Prototyping
- OF@TEIN SDN service Experiments & cooperation with partners



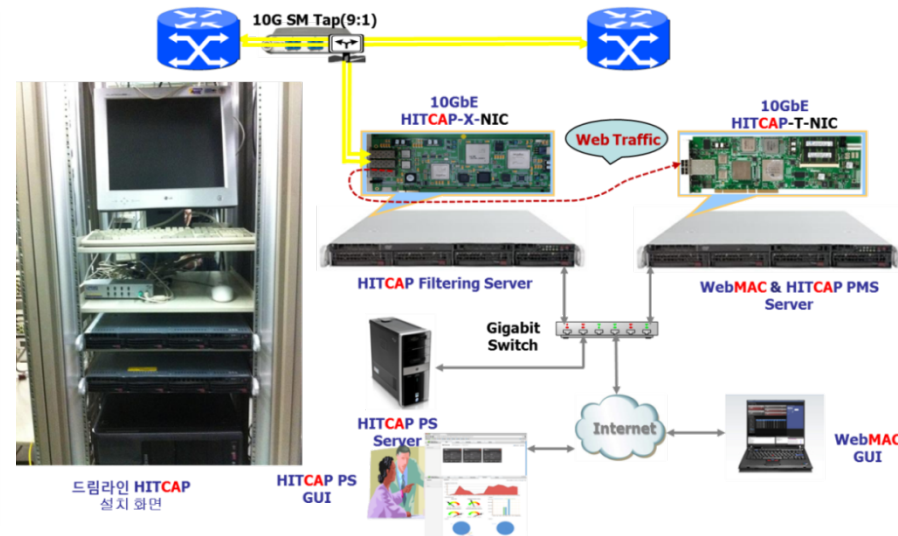
Open Web IPTV

- Develop open contents transmission platform and deploy testbed
 - Develop web based **contents delivery platform**
 - Develop web based contents gathering tech (**medical contents**)
 - Video service test with **using CCN tech.**
 - **QoS/QoE measurement** research via contents delivery
 - Deploy global contents delivery research testbed



Realtime traffic control

- Deploy and test realtime traffic control function
 - 10Gbps level web traffic analysis and monitoring
 - Develop GUI for monitoring
 - Domestic function test
 - Practical test with placing prototype system in TEIN POP (HK, SG)



Plans

- Backbone Restructuring is expected in 2014
 - Focus on testing & verifying of ICT technology
 - Enable flexible environment for future internet research
 - Expand based on existing facilities(OF/SDN, mobile and so on)
- Participating Various pilot project
 - BigData analysis, Giga Internet, M2M, Clouds and etc.





Thank you

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