

# **KOREN UPDATE**

2014. 08. 25

## **KOREN**



# What is KOREN?

## KOREN(KOrea advanced REsearch Network)

- Deploy convergence communication and future network testbed
  - Promotion through sharing research results based on collaborative relationship among academia, industry and government
- Provides Up to 60Gbps Backbone Capacity & 1/10Gbps User Connections
- 60-Gigabit Member institutes (mainly for research & development)

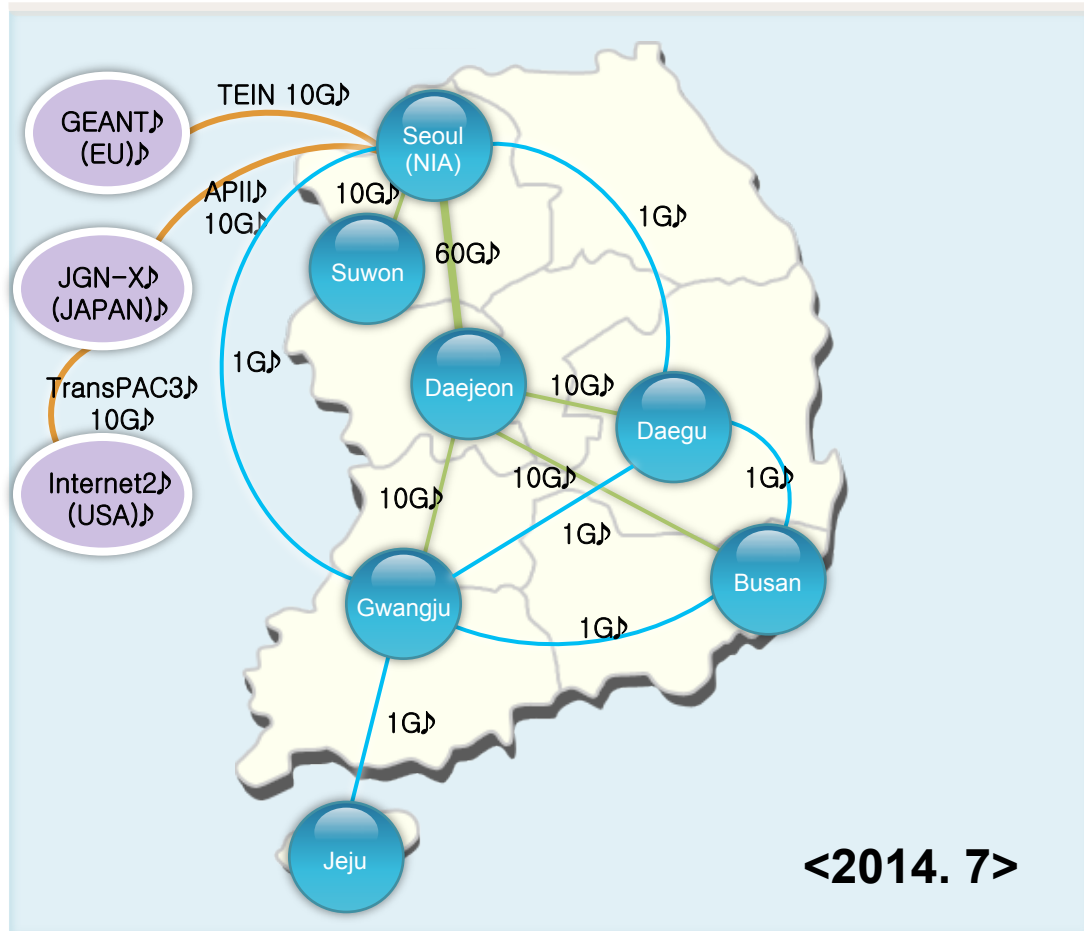
## Global Connectivity(APII/ TEIN)

- (APII) Asia Pacific Information Infrastructure (KR-JP)
  - 10Gbps between KR and JP (Advanced Applications and Collaborative Networks)
  - KOREN/APII/JGN-X participate in Global Lambda Integrated Facility (GLIF)
- (TEIN4) Trans Eurasia Information Network (KR-Asia-EU)
  - 10G between KR-HK , and HK -SG , now under preparation
  - Advanced Applications and Collaborative Networks within Asia and EU countries



# KOREN Network

## Network Testbed for Future Internet Research & Development



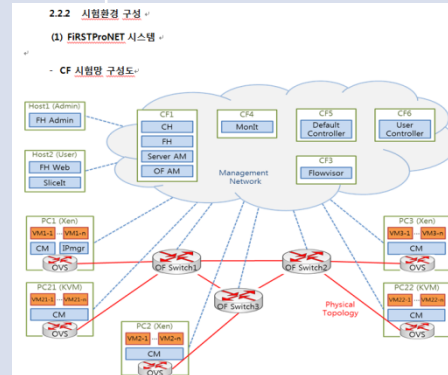
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- 6 node plus 1 sub-node
- Ethernet over ROADM wave transport network
- M2M and Cloud test facility connected
- Connect global RnE network (APII/TEIN)

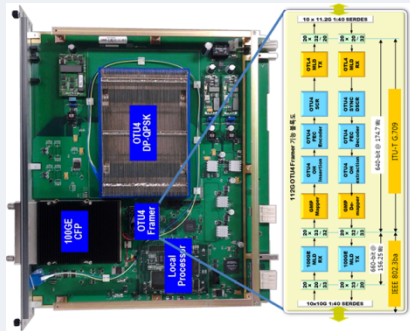


# Recent Main Activities on KOREN

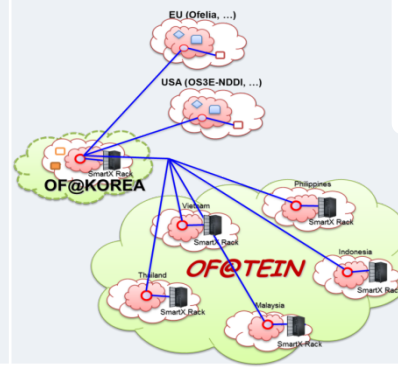
## Field Trial Tests with Trial Network System Product over KOREN



**Test & Verification  
of Research results**

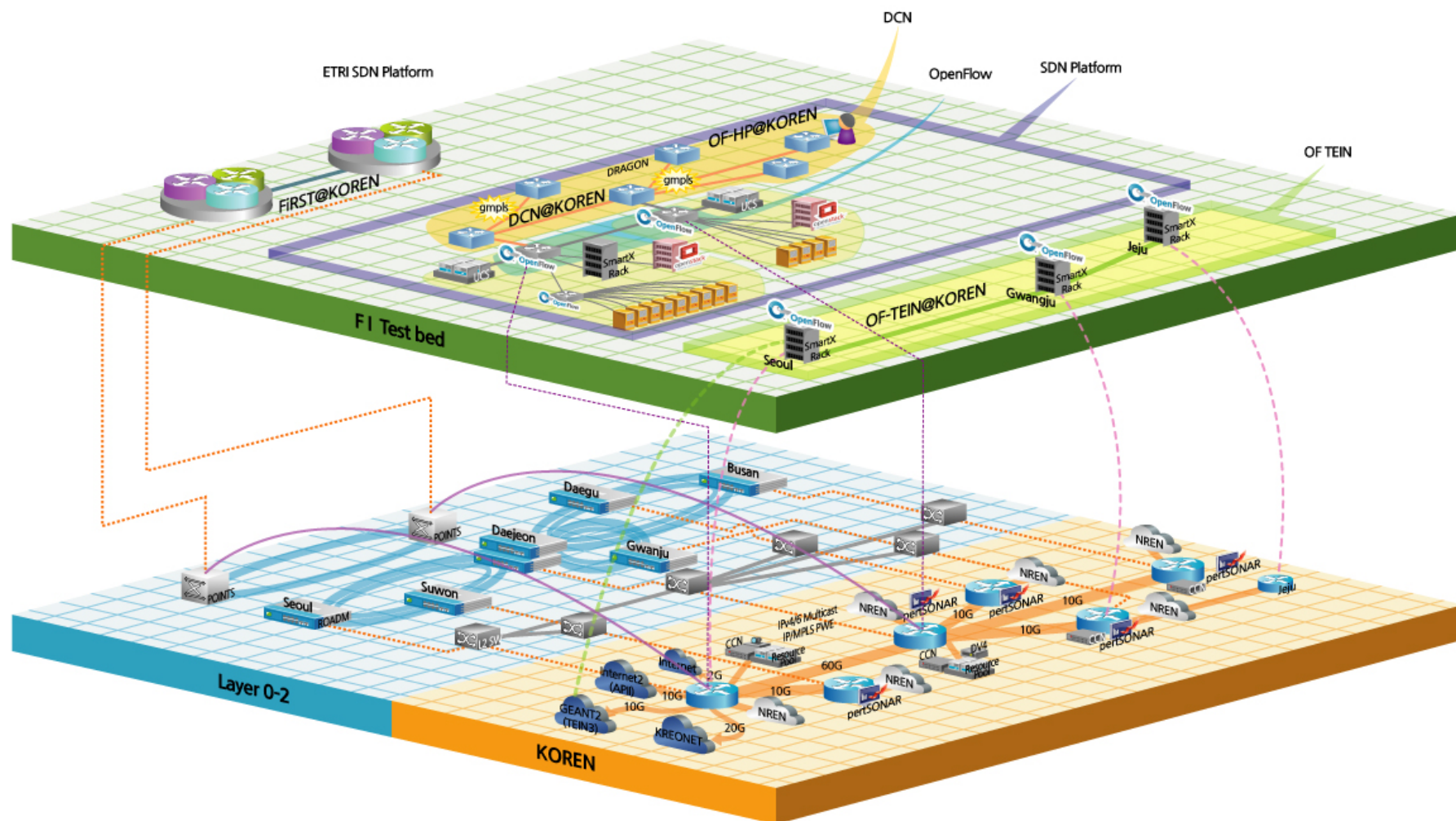


**100G transmission test trial**



**SDN global testbed  
deployment**

# FI Testbed in KOREN





## 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

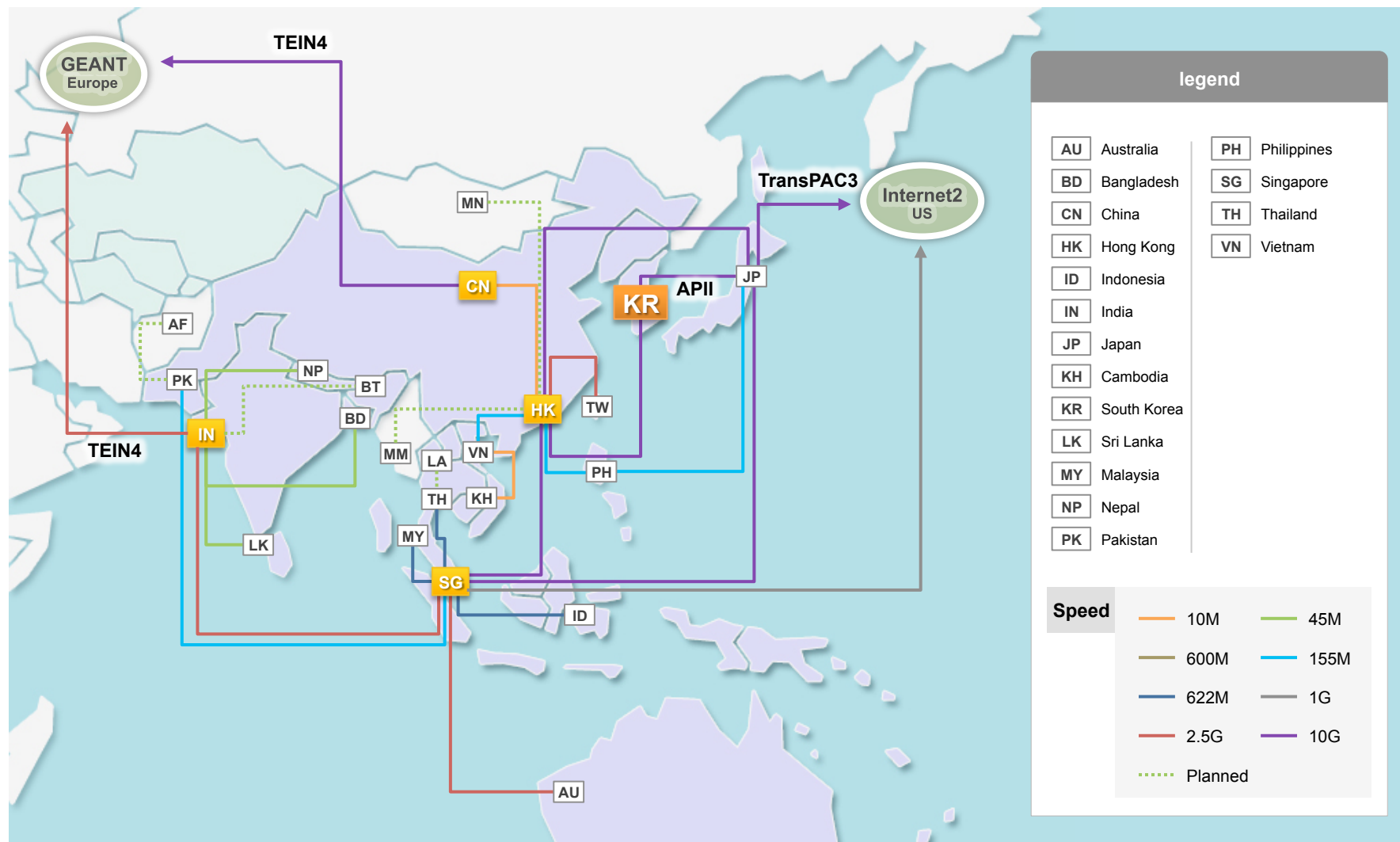
- Providing resources which could make Bigdata related technology and service based on public data
- KOREN provide connectivity to someone or company which want to access Bigdata facility.







# Connectivity

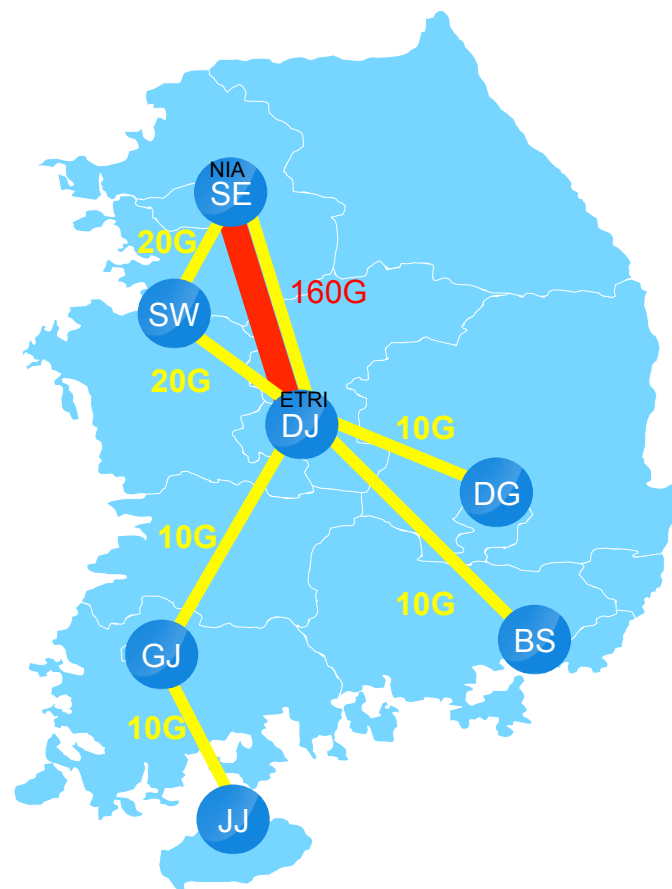
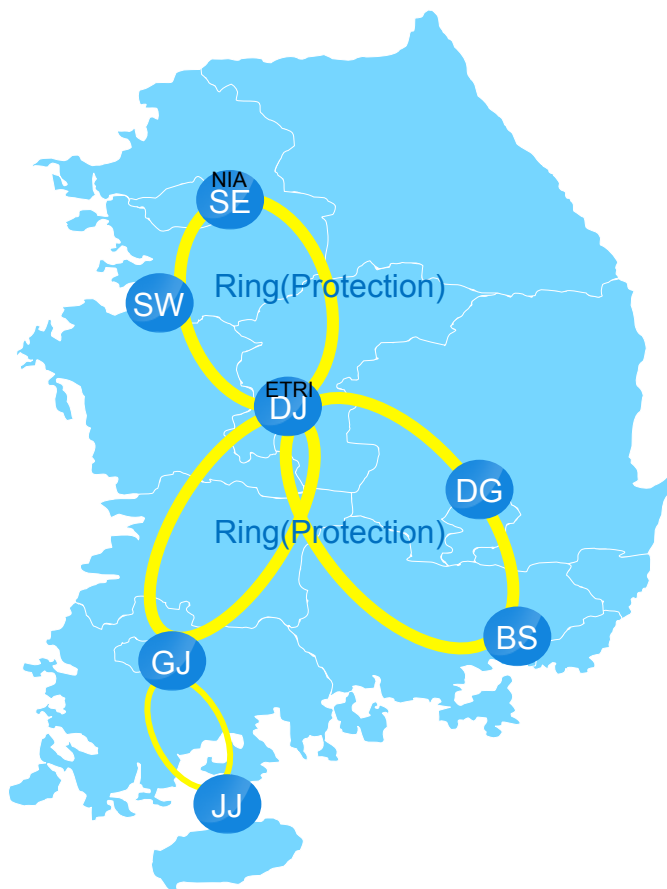




# KOREN Update

Rebuilding 100G infrastructure

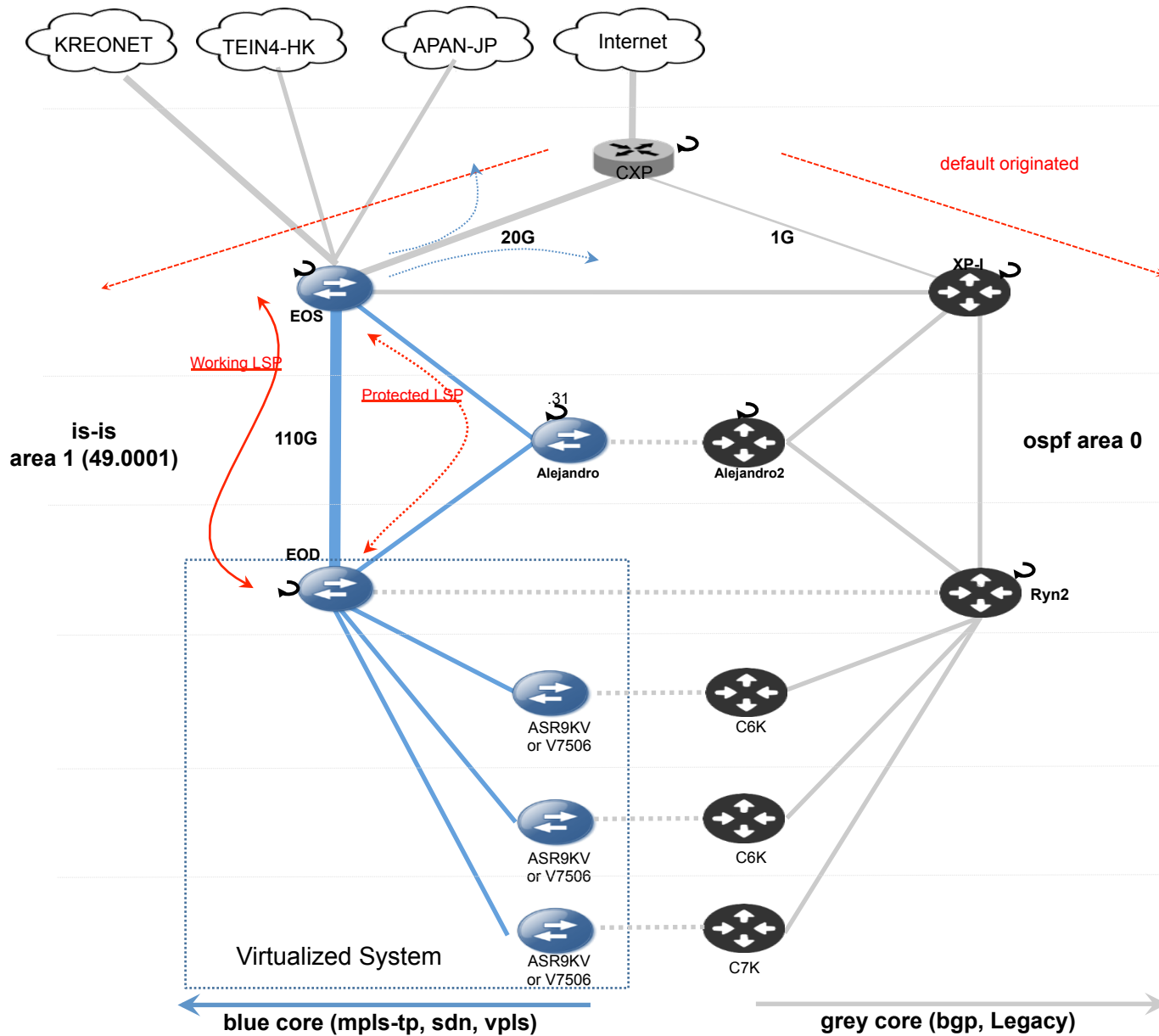
ROADM + ASR Routers



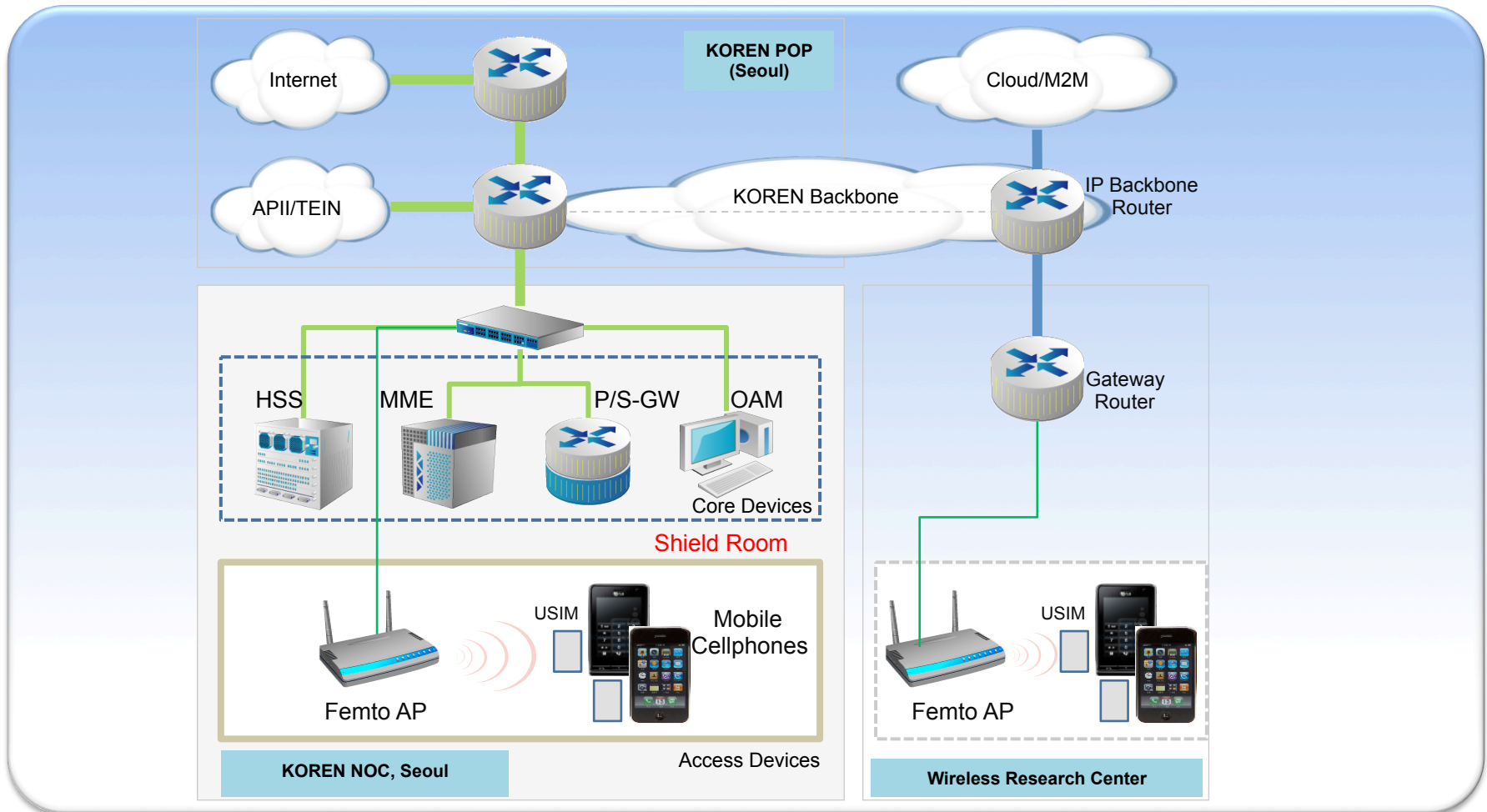
BS: BuSan  
DG: DaeGu  
DJ: DaeJeon  
GJ: GwangJu  
SE: Seoul  
SW: SuWon  
JJ: JeJu



# KOREN Network diagram in 2014



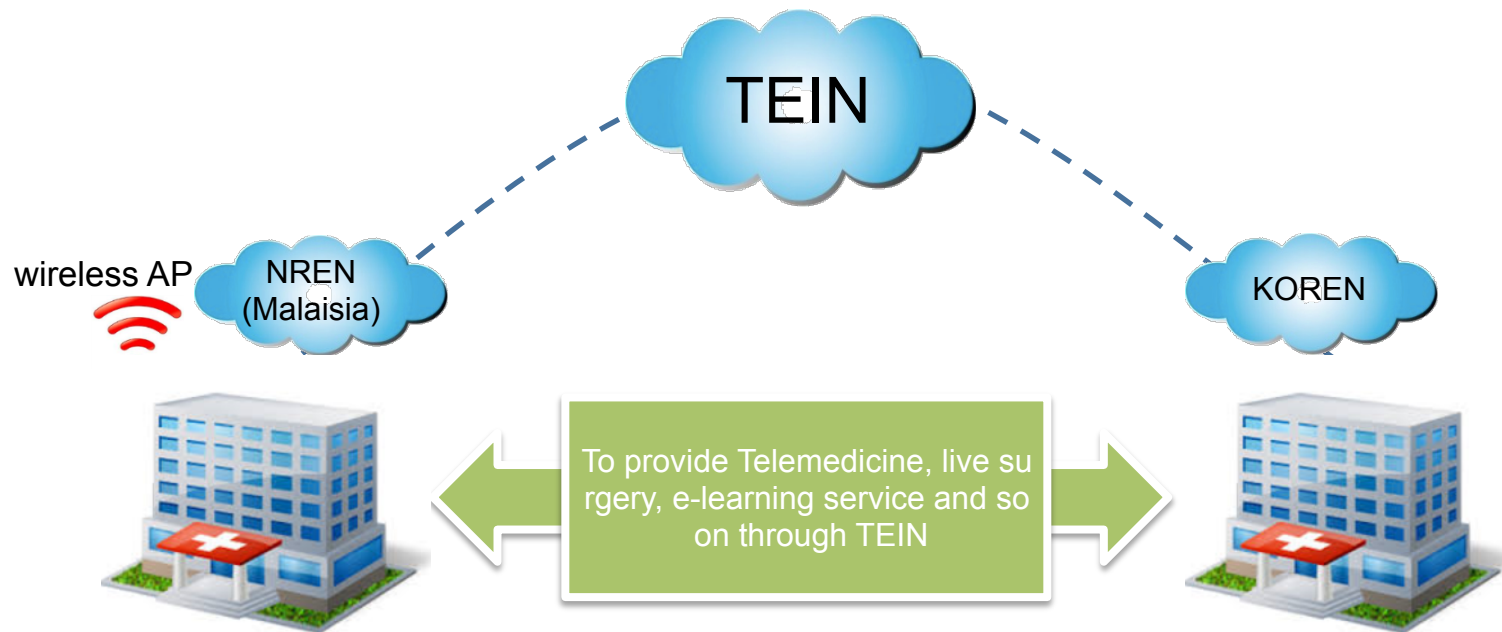
## Mobile testbed



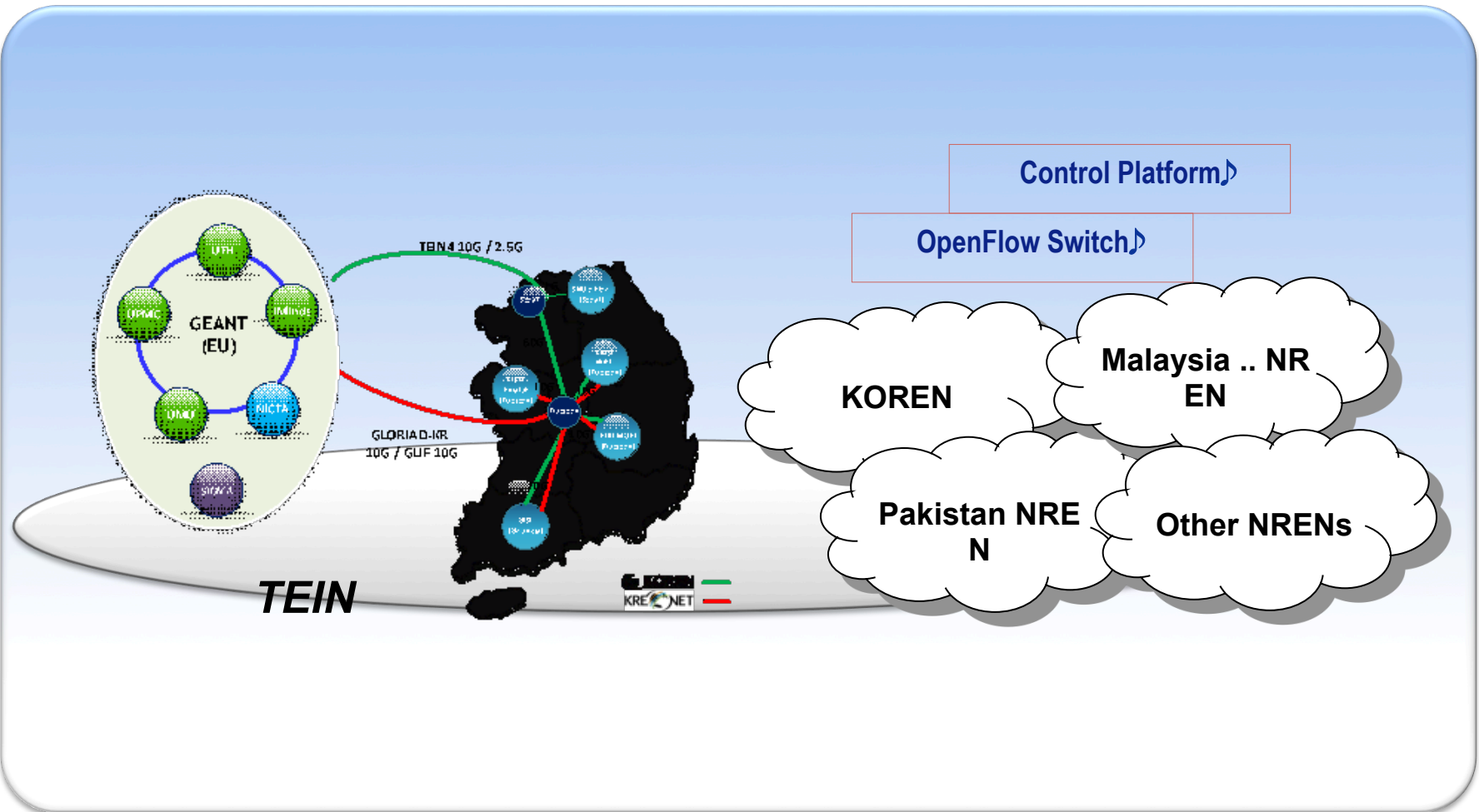


## Global Project in 2014

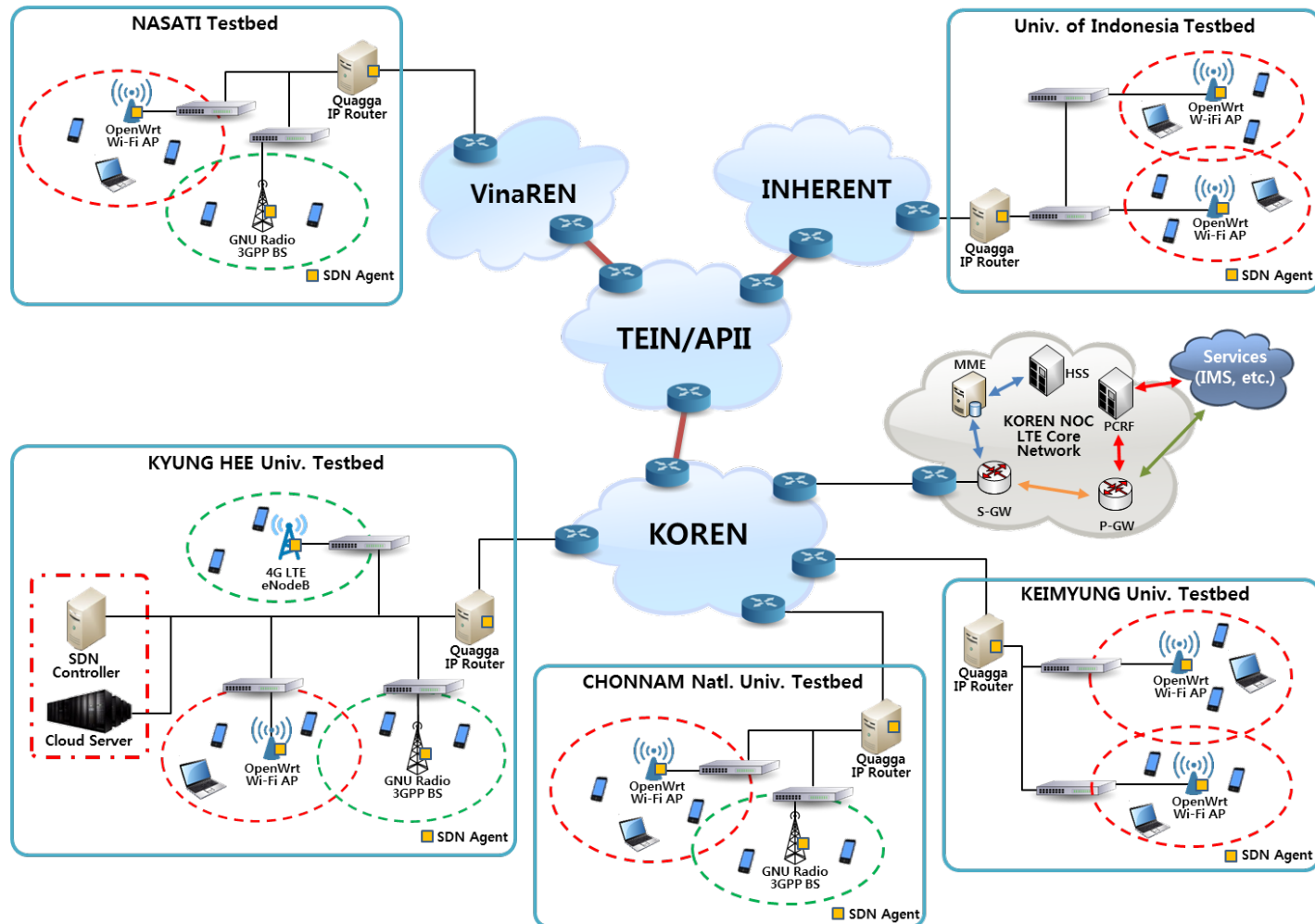
- A Field Trial Research on Global Network Medical e-Learning using KOREN and TEIN



- SDN / OpenFlow R&D (KOREN and ASEAN countries)



- A study on Global Testbed and Its Test of open Mobile Network Platform





## Plans in 2014

### ▪ **Collaboration in 2014**

- Expand collaboration infrastructure in partners' environment (CAREN and so on)
- Share the research result and experience based on previous projects
- Consider new collaboration fields

### ▪ **Backbone Restructuring & FI Infra enhancement in KOREN**

- Enable flexible environment for future internet research
  - Making stable existing facilities(OF/SDN and so on)
  - Co-work with OF@Korea (FIF Testbed WG)
- Those would make eTEIN project more enriched.





**Thank you**

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