SK Telecom OCP Update - Overview

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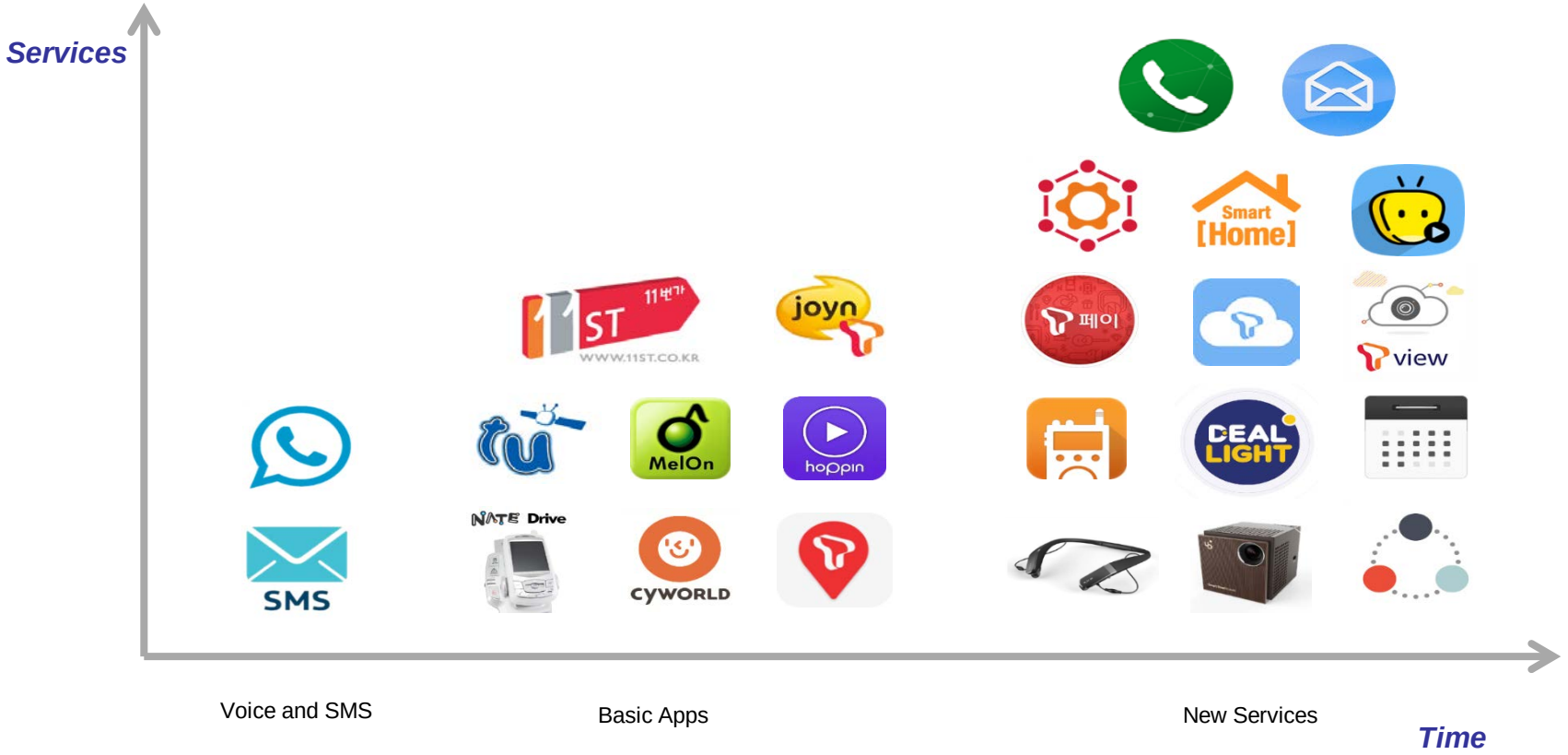
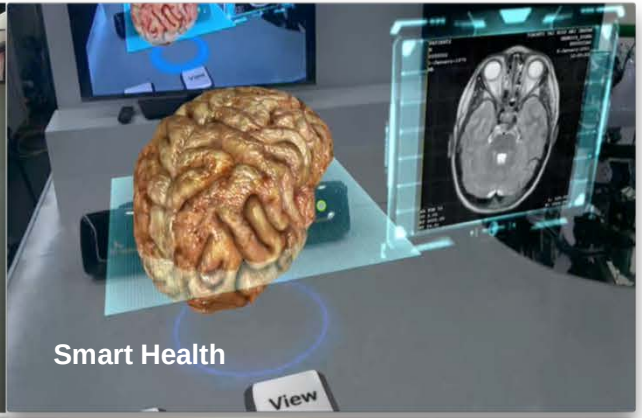
SKT services over time



Next generation services



Problem at hand

Current telco business is unsustainable

- Data traffic growth is exponential
  - x5 growth in next five years
- Revenue growth is flat
  - Saturated market, flat ARPU, no new revenue source yet

On the other hand

Expectations on telco infrastructure are daunting

- 5G requirements
  - IoT and other applications, VR, connected car, etc.
  - Higher bandwidth, lower latency, massive connectivity, reliability
- Customer expectation is higher than ever
  - Network coverage should be universal, provide good quality
- Need flexible, programmable, scalable infrastructure

Approaches to innovation

- Embrace open technologies
  - Both software and hardware (OCP Telco!)
- Use commoditized components
  - TCO reduction, multi-vendor, proven technologies
- Include differentiating technologies as needed
  - Hardware accelerators (Xeon+FPGA), new access, optical transport, etc.
- Collaborate with like-minded partners
  - OCP, TIP, OpenStack, ON Lab, OPNFV, etc.

SKT next gen infra: COSMOS

Composable, Open, Scalable, Mobile-Oriented System

Application

Telecom Services	*New Services*	*IT Services*
LTE-A *5G* *LoRa*	*T-Phone* *Smart Home* *Mobile IPTV* *Mobile Pay* *VR*	*BSS* *ERP* *OSS* *Big Data*

Open Software
(Virtual Infrastructure)

Unbundled

Open Hardware
(Physical Infrastructure)

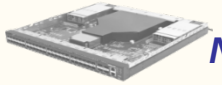
openstack CLOUD SOFTWARE — *Virtual Machine*

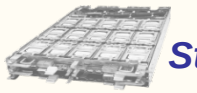
docker — *Container*

ONOS Open Network Operating System — *SDN*

OPEN Compute Project

 *Server*

 *Network*

 *Storage*

Orchestration

ETSI World Class Standards

NFV MANO

Provisioning

CHEF

Visibility & Control + Config

* Specific technology names are for illustration purpose only.

OCP trial update

- Purpose
  - Get a firsthand experience
  - Application test with real(istic) workload, e.g., Hadoop, OpenStack
- Approach
  - Start small; Try multiple vendors
  - Joint POC by R&D and business units (network and IT infra teams)
- Schedule
  - Vendor selection under way; Initial result by 3Q 2016

OCP – Plan for upstream

- Share experience and contribute our design
- Areas of focus
  - All flash storage: AF-Media (media server), NV-Array (JBOF)
  - NFV appliance: T-CAP (converged appliance platform)
  - Wedge trial
- Presented at OCP summit, March 2016

Synergy with other projects

- Telecom Infra Project
  - Focuses on mobile services and protocols
- ON Lab
  - ONOS (SDN controller), CORD (especially M-CORD)
- SKT's own project
  - Private cloud (OpenStack), Mobile PaaS (Cloud Foundry)
  - Operation Intelligence and SDV (visibility)
  - vEPC, vIMS trials

Way forward

- We should
  - Share experiences and best practices
  - Work together to define OCP telco requirements
  - Find ways to collaborate effectively
  - Consider combining procurement when possible