Infrastructure for the Intelligence Big Bang
Next Big Thing

Major Business Areas

ICT
(IoT, Mobile, A.I.)

= Next Big Thing

The 4th Industrial Revolution

Accelerated Revolution

Increased Scope & Impact

100 years → 70 years → 40 years

1st
1784
Steam engine

2nd
1879
Light bulb

3rd
1969
Computer

4th
2015
IoT, AI, Cloud,…

(Source: KT Institute of Economics, 2016)
The Online World (2012 view)
ICT In the Game

Digital Diffusion

Electronic component ratio in Aviation Sector
- 10% in '2005
- 30% in '2013

Electronic component ratio in Medical Sector
- 10% in '2005
- 45% in '2013

Electronic component ratio in Automobile Sector
- 23% in '2005
- 60% in '2013

(Source: Bain & Company, 2016)
The (Near) Future
Intelligence, Driver of Revolution
New Era of AI

Follows given goals and method

A.I. with Deep Learning

Rule-based

Unsupervised Learning + Autonomous Perception

Big Data Computing Power

Human-Level A.I.

Agency

Free Will

Superhuman A.I.

Creativity

Singularity

(Source: B.T. Zhang, Status & Perspective of Intelligent Information Technology, 2016)
Operators in the Game
GiGA Network (Fixed/Wireless)

Connected Intelligence (Real-time Cloud)

Data Intelligence (Data Exchange)
The GiGA Network

- 1980: ISDN
- 1990: ADSL
- 2000: VDSL
- 2010: FTTH
- 2020: LTE-A
- 2020: HSPA+
- 2020: LTE
- 2020: EDGE
- 2020: EDGE
- 2020: Giga Internet
- 2020: Giga LTE

Speed:
- 1 Gbps
- 100 Mbps
- 10 Mbps
- 1 Mbps

5G
<table>
<thead>
<tr>
<th>Feature</th>
<th>LTE</th>
<th>5G</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Speed</td>
<td>300 Mbps</td>
<td>20 Gbps</td>
<td>X 60</td>
</tr>
<tr>
<td>Latency</td>
<td>20 ms</td>
<td>1 ms</td>
<td>X 1/20</td>
</tr>
<tr>
<td>Connectivity</td>
<td>200</td>
<td>2,000</td>
<td>X 10</td>
</tr>
</tbody>
</table>
5G Service
(Pyeongchang Test Event)
AI in Home

GiGA Genie

Network

AI Cloud

Speaker Identification

Complex Query

Context-based Dialogue

Multi-speech Recognition

Text (Voice1) Text (Voice2)

Multi-Lingual Auto-translation

History-based Dialogue

According to your saying 10 days ago…

The man

Then

There

Turn on the TV

and

Turn off the music 🎵
Indoor Positioning Solution

Outdoor Positioning Solution

3 Feet Accuracy

Reference Station Information

Regional Corrective Information

GPS corrective information (Broadcasting)

KT DGPS

3D Automatic collection of radio wave maps

2F

Location Intelligence

National Geographic Information Institute

KT corrective information Server
KT AI Craft Shop

3rd Party → Open SDK → On/Off Testbed → Service Launching

GiGA Genie Open

[Phase 1]

Al Engine Open

[Phase 2]

Service SDK: '17.6~

Voice/Dialog SDK: '17.9~

GPU Cluster (NVIDIA)
Domain Expansion

Differentiated Intelligence

Stronger Infra 5G Network

Intelligent Service Big Bang

Operator + 3rd Party

Intelligent Platform

GiGA Infra
Thanks!