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# Toward the Future

**-- International Collaboration on ICT R&D --**

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Masao Sakauchi  
President

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National Institute of Information and Communications Technology

## ➤ ICT's 3<sup>rd</sup> Paradigm

- **Phase 1 (20 years ago)**

the main objective was to create computers and communication systems

- **Phase 2 (until a few years ago)**

the main objective was to create a cyber world on the internet

- **Phase** (from now and into the future)

**3**

main objective is to harmonize the cyber world with the real world

- **Harmonizing the Fields of ICT**  
(cyber-physical systems)  
(disaster resistance, energy, environment, transportation, agriculture, medicine, nursing, etc.)
- **Big Data/Sensor/M to M**  
(mobile & cloud, new sensors for radiowave bases)
- **Cybersecurity**  
(security for another dimension)
- **New-Generation Network**  
(shattering the limits of optical networks and wireless networks)  
(SDN, seamless virtualization, communication/processing/data's harmonization...)  
(space-oceanic high-speed communication)
- **Human Communication**  
(person to person / a more advanced degree of interaction with ICT)
- **The Permanent ICT Foundation & Its Frontier**  
(more accurate time, etc.)  
(quantum ICT)  
(neural information and communication)

