



## RFID Middleware Roles in Digital Convergence Age

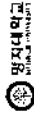
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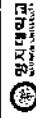
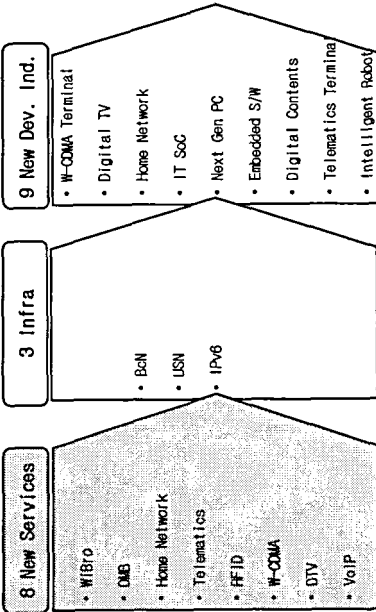


## Introduction

- Digital Convergence Between
  - Voice and Data
  - Telecommunication and Broadcasting
  - Online and Mobile
- Some Example
  - Telematics : IT + Automobile
  - Home Network : IT + Construction + Home Equipments
- Before 10 years : Single IT Industry (Computer, Internet)
- After 5-10 years : Convergence Between Telecommunication, Broadcasting and Information Based on BCN
  - MIC IT839
  - Final Goal : USN (Ubiquitous Sensor Network)
  - RFID Becomes Basis
- Importance of RFID Middleware Roles in Convergence Age
  - In this Study
  - Analysis of Relationships between RFID & New Developing Industries
  - Derivation of Roles of RFID Middleware in Convergence Age

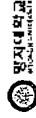
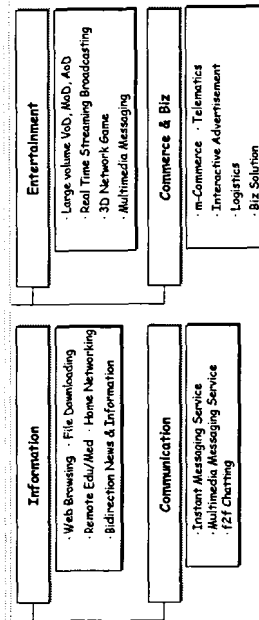


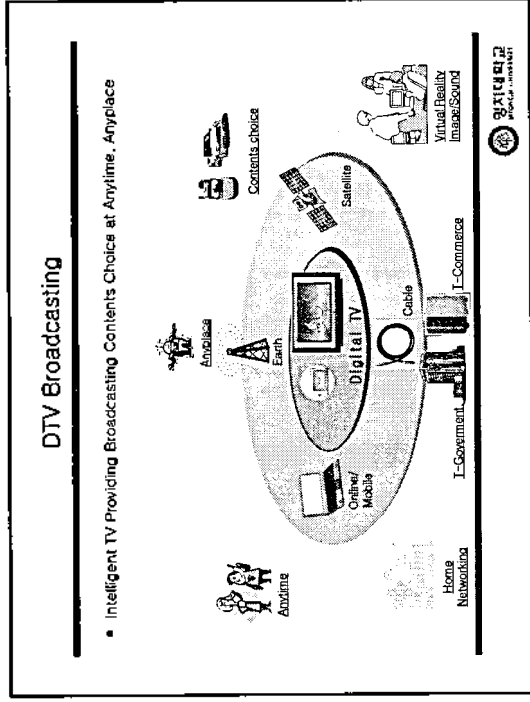
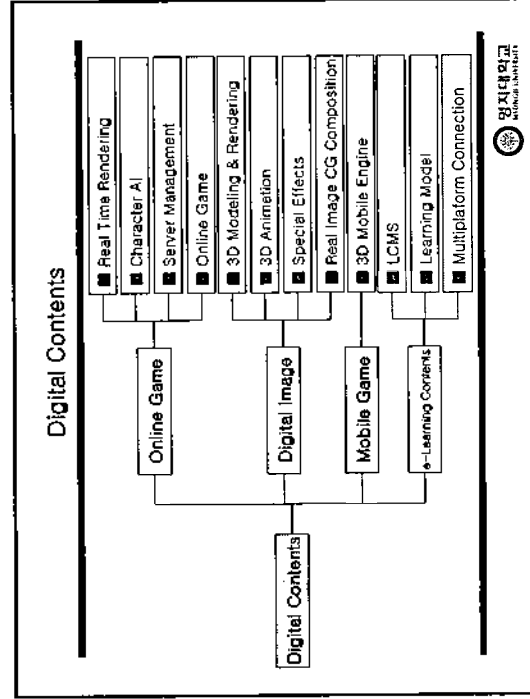
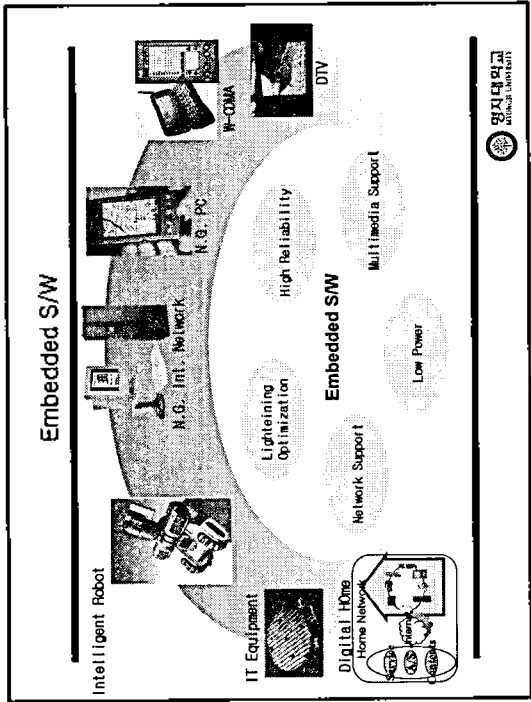
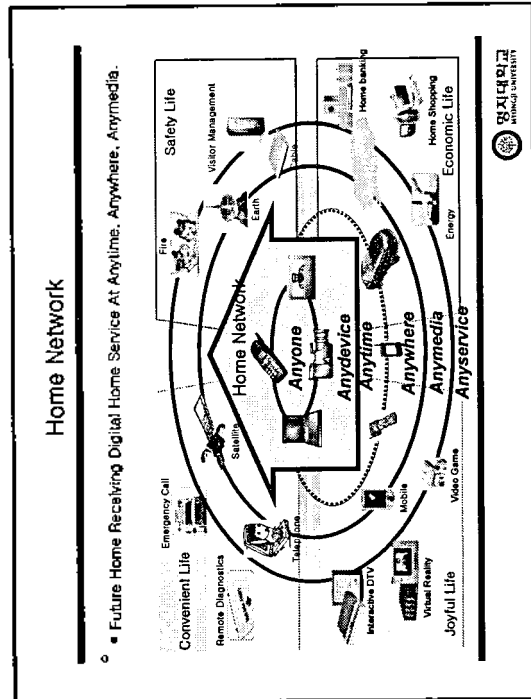
## Strategies

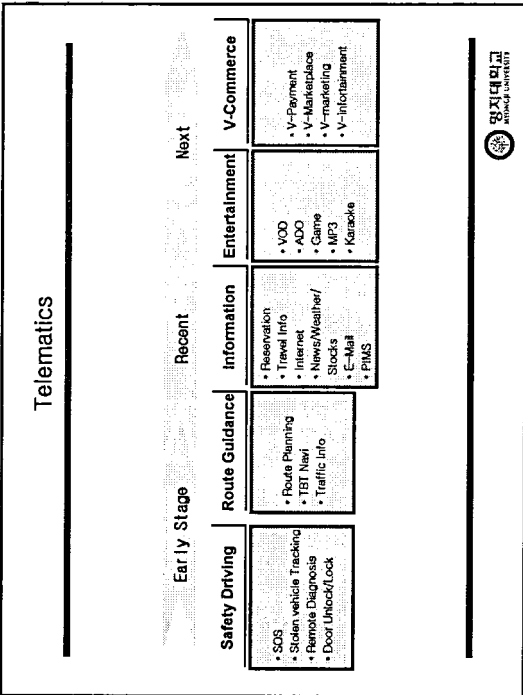


## Wibro

- Information, Entertainment Service at High Speed and Low Price  
 Communication, Commerce & biz service (Expected)

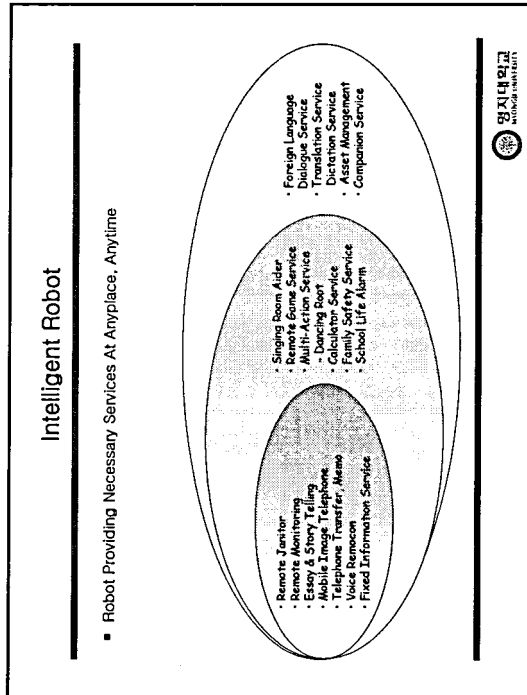






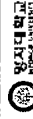
## SoC

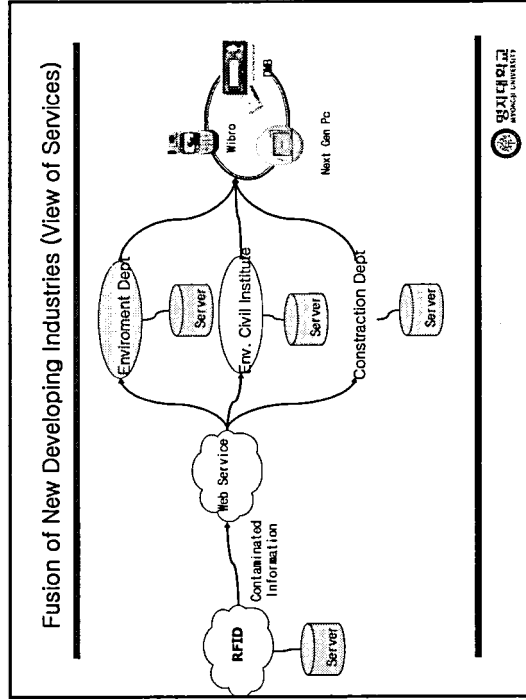
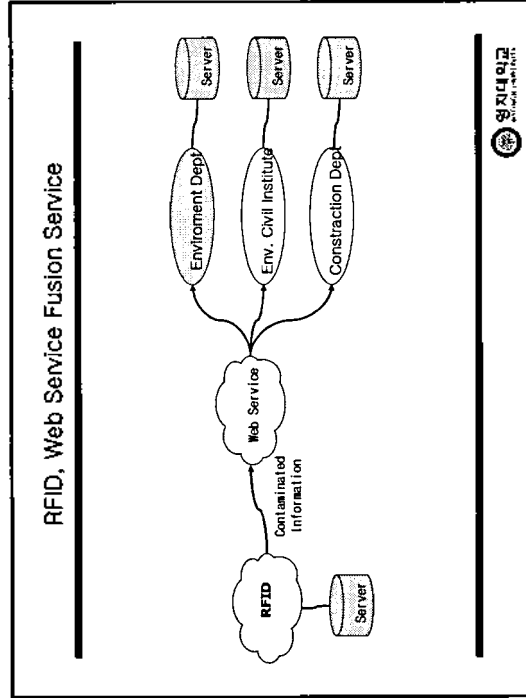
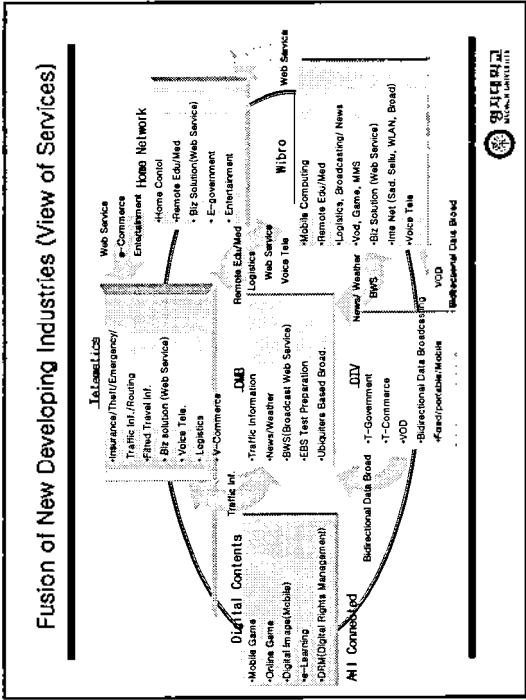
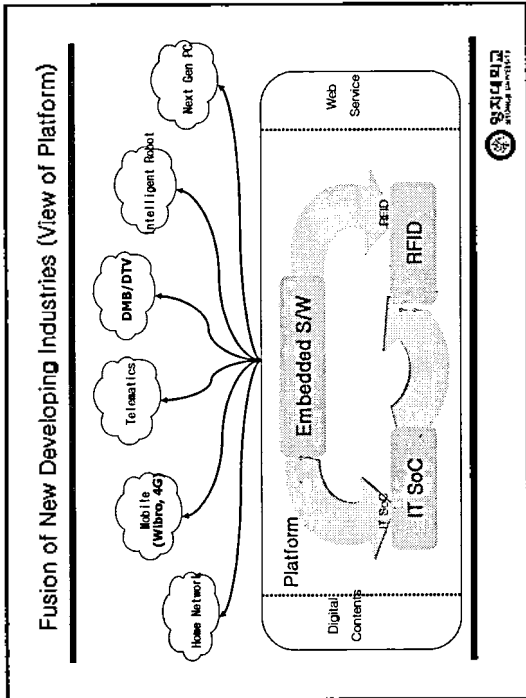
- System on a chip
- Semiconductor = Memory + SoC
- Recent SoC : High Speed, Low Power, High Integration
- High Speed SoC : Required for Increase of Telecom Speed and Telecom Quality



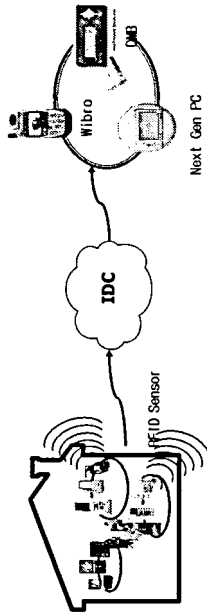
## Next Gen PC (Wearable Computer)

- **Definition**
  - Small, Light, Portable Equipment Using Belt, Jacket
  - Pocket Size View or Head Mount Display
  - Input by Voice or Cordless Input Equipment at Wrist
- **Characteristics**
  - Freedom of Operation : Other Operation While Using Wearable Computer With Various Interfaces
  - Body Expansion : Various Sensors Expanding limits of Human Body
  - Body Expansion : Autonomous Recognition : Changing Information Providing While Acting Continuously

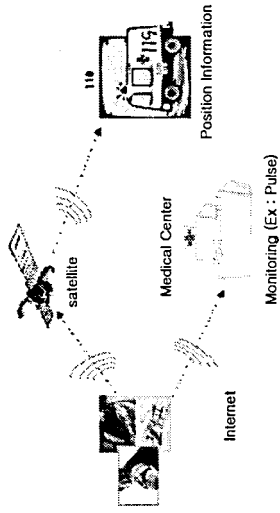




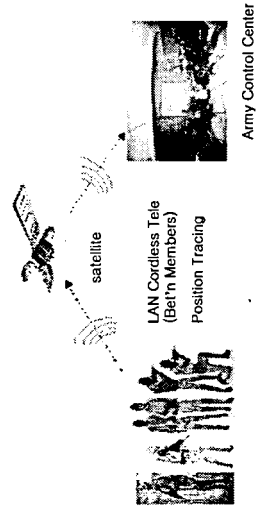
### Home Network, RFID, Wibro Fusion Service



### Emergency Call Using RFID

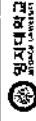


### Network Soldier Using RFID



### Connection Between RFID and New Developing Industrial

Ind.	Connectivity	Importance of work
Home Network	Including Many RFID's : Sensor Information Connected With Outside Thru Network	High
Wibro	Receive RFID Information Thru Network	Low
DMB	Portable TV : Receive RFID Information Thru Network (Ex : Road Condition)	Medium
Telematics	Services : Safety, Routing, Internet Contents : For Safety, Alarm When Distance Between Cars is Short	High
Next Gen PC	Closely Related : Examples : Medical Equipments Network Soldiers	High

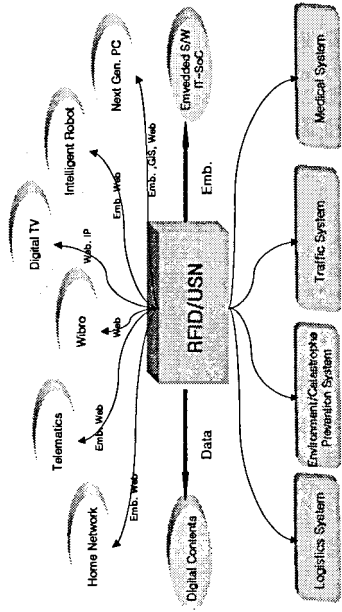


### Connection Between RFID and New Developing Industrial

Ind.	Connectivity	Importance of RFID
Intelli Robot	Sensing in Basic : Many RFIDs are Used for Companion Service	Medium
Embedded SW, IT-SoC	Form Platform with Embedded SW, IT-SoC : RFID = Chip + Antenna : IT-SoC = Chip : Chip Include Embedded SW	High
Digital Contents	Not Related with Directly : RFID Provides D.C	Low



### RFID/USN Application Framework



### Additional RFID Middleware Functions for NDI

- GIS Connection
- Web Service / ebXML Connection

