

An Approach for developing RFID Applications

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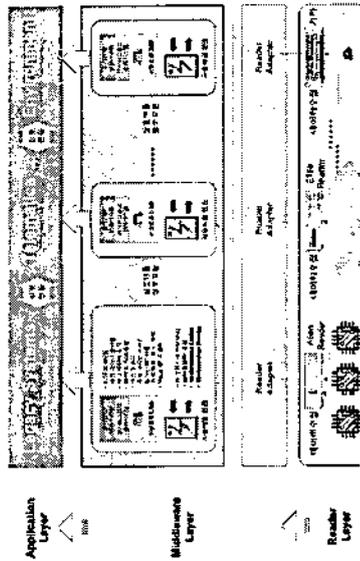
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RFID Systems & Current Situations

- ◆ **RFID(Radio Frequency Identification):**
 - transmits the identity (in the form of a unique serial number) of an object or person wirelessly, using radio waves
 - to reduce the amount of time and labor needed to input data manually and to improve data accuracy
 - Non-contact, Bigger Memory size, Sensing in motion, High Reliability, High Speed, and etc.
- ◆ **Current trends in RFID Technologies**
 - USA, Japan and EU continuously invest on developing RFID Technologies and Application
 - IT 839 Strategy of MIC(Ministry of Information and communication Republic of Korea)
 - One of 8 core services, One of 3 future Infra business(USN Network)
 - Ministry of Commerce, Industry and Energy
 - Roadmap for promoting RFID industries
 - Realization of e-logistics

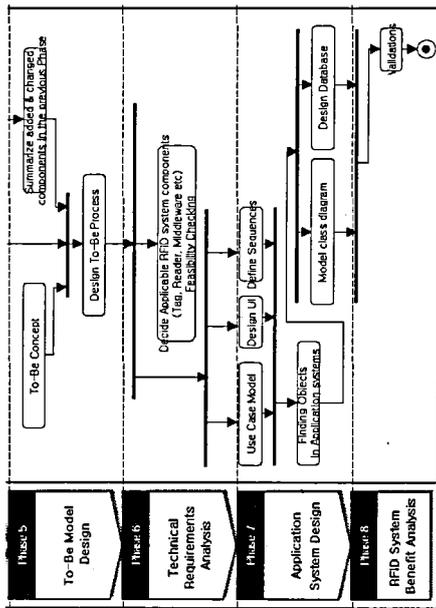
RFID System Architecture



Issues in RFID Applications

- ◆ **How to promote RFID Applications in industry?**
 - Technology itself(High Reliability, Low cost ...)
 - Capable of creating values in business
 - Etc
- ◆ **Limitations intrinsic to current RFID applications**
 - Limitations of known applications adopted by market leaders
 - Simple ideas derived from function-oriented approach
 - Insufficient ROI Analysis
 - Feasibility

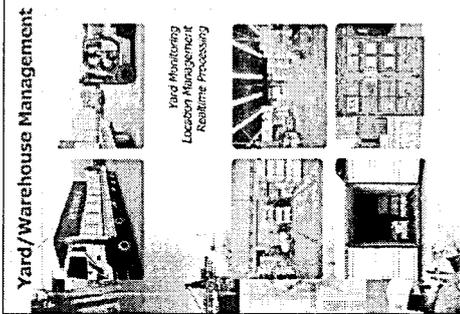
Activities in the proposed approach-2



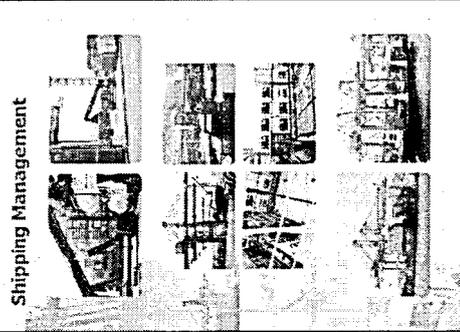
Case Study

- ◆ Applied to 7 cases through phases 5 in different industries
- ◆ Container tracking in marine transportations was targeted to validate the proposed approach and to develop a new RFID application.
 - Target Container, trailer and chassis tracking ←- Marine transportation companies
 - Target parcel tracking ←- Owner of goods
- ◆ Benefits
 - Proper asset management
 - Improve planning accuracy
 - Customer value creation
 - Provide advanced service for customers (accurate delivery estimation, status of parcels and etc.)

Container transportation



Container transportation



Summary

- ◆ RFID applications are as important as RFID technologies
- ◆ Successful RFID applications are key element for prevailing RFID use in industries
- ◆ Proposed an effective methodology for developing RFID applications based on analyzing business processes
- ◆ Applied to container tracking in marine transformation industries & tested feasibility
- ◆ Need more work to specify application requirements for each industry and application.

Acknowledgements

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