A study on the user requirement
for intelligent railway information service

Jung-Hwa Park,[*]   Young-Hoon Kim,[**]   Soon-Heum Hong,[***]

Abstract

The purpose of this thesis is to know and understand the user requirements to provide with intelligent railway information service in response to the Ubiquitous environment. The railroad specially has a disadvantage of door-to-door service, however by using the information and communication techniques, we can provide the passengers who are using the intermodal transportation means with the realtime information, therefore we can overcome the above disadvantage.

To deduce the passenger's needs for providing the future-type railway information service, we introduce the results of the questionnaire. In chapter 2, we studies on the concepts of intelligent railway information service, and in chapter 3, we investigate the cases of Japan and China, and in chapter 4, we study the passager's satisfaction by the questionnaire concerning the railway information service and suggest the needs for information offering.

1.

2004   4   .

.

.

.   (Door-to-door)   .

.

.   ,

.   2   , 3

, 4

.

2.

2.1.

'

,   .   ,

,   ,   .

그림 1

1   .
                                    ,

                                                                    .

2.2.

                                                                    .
                            .

                                        1

	, , , , , , , , , , , , , , , , , ,
	, , ,
	, , , , (/)

3.
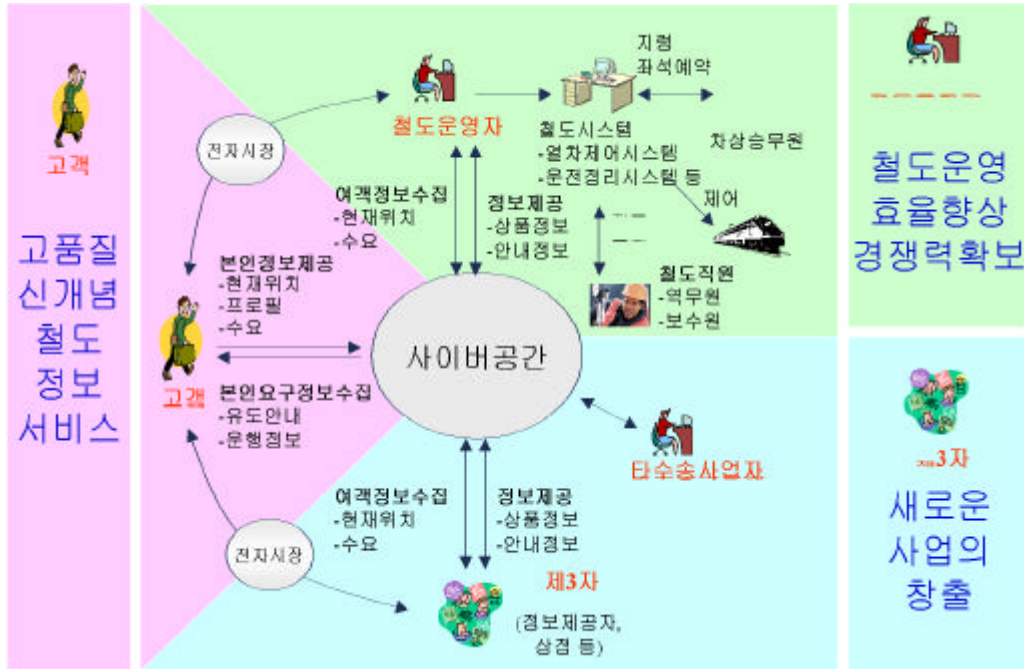   3.1.
     1990   (ITS;Intelligent Transport System)
                     (ARTS;Advanced Railway Transport System)

·   ,   ,   ·
,   4   ·

,   ,   ,   ·   ,   ,
·   ·

, Odakyu Electric   "goopas"
·

3.2.

'   ,   ,   "   7
·   2   .

표 2   표 7

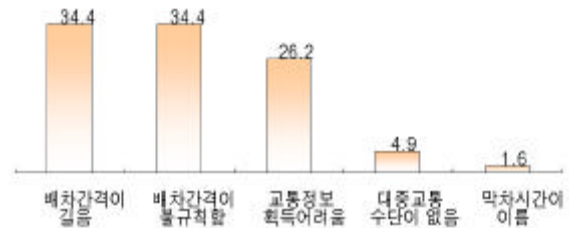|	
Intelligent user navigation system	, ,
Railway E-business System	,
Inter-Model Transportation System	, , ,
Intelligent Railway Resources Management System-IRRIMS	
Intelligent Railway Operation Management System	
Intelligent Train Control and Dispatching System	
Intelligent Emergency and Safety System	

4.

305
·

4.1.

42.3%
18.4% (61)   .   61
3   .
'
,   ,
42%   .

그림 3

4.2.

'   ,
4   .   '   ,

5   .   47.9%   49.2%
       .   '   ,   '   ,

                                    .

전혀
필요없음   필요없는편   보통   필요한편   매우필요함

1.6   13.4   14.8   47.9   22.3

            4   5

전혀
필요없음   필요없는편   보통   필요한편   매우필요함

1.0   16.1   15.1   49.2   18.7

4.3.

        ,   ,   ,   ,

                                    .

   4.3.1.

                                                        3

전혀
필요없음   필요
없는편   보통   필요
있는편   매우
필요있음

5.9   30.6   17.7   35.4   10.5

            6

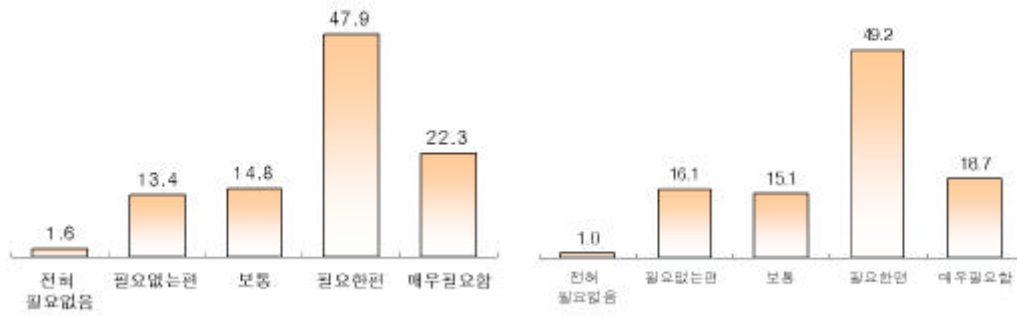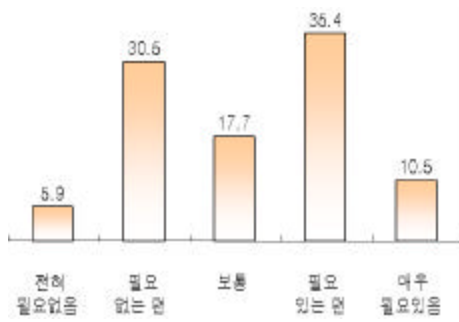|	

	, , ,
	       , ,
	    ,

	, , , , ,
	, , , ,

          6
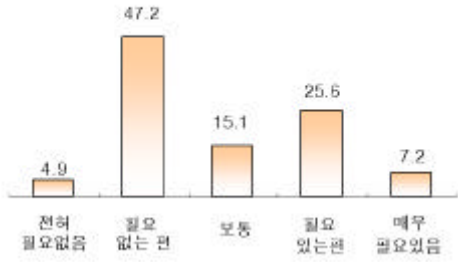35.4%   .   3   .

   4.3.2.

            7
       47.2%   .   4   .

7

	4
	, / , , , ,
	, , , , ,
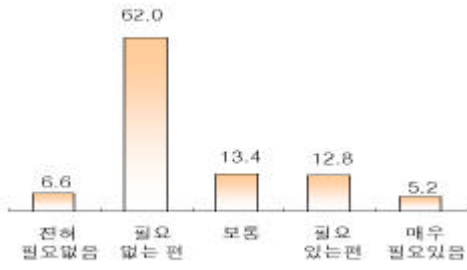
8

	5
	, , , , , , ,
	, , , , ,

4.3.3.

8

62.0% . 5 .

4.3.4.
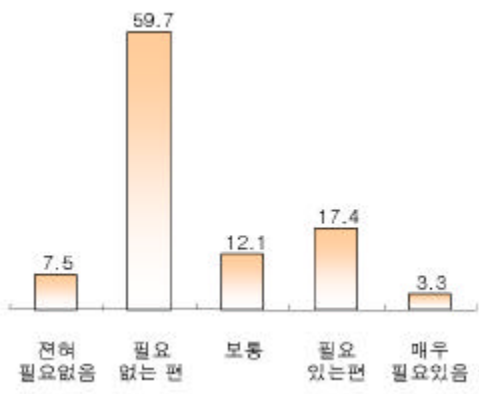
9

	6
	, , , ,
	, , , , ,

9

59.7%   .   6   .

4.3.5.
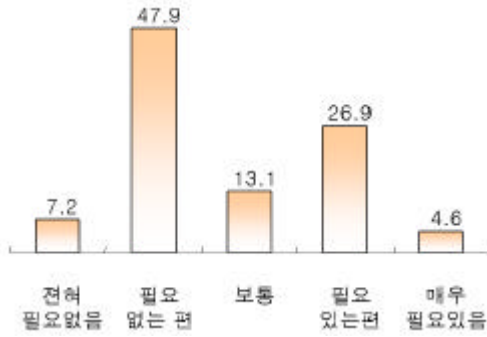
                                                                7

	, , (/),
	, , ,

10

10

47.9%   .   7   .

	필요성	불필요성	가장필요한 정보
철도역으로 출발하기전의 상황	45.9% >	36.4%	• 열차 운행 시간
철도역으로 이동 도중 상황	32.8% <	52.8%	• 열차 운행 시간
철도역에 도착 했을때의 상황	18.0% <	68.5%	• 열차 운행 시간
철도 승차중일때의 상황	20.7% <	67.2%	• 도착 예정 시간
도착지역에 도착 했을때의 상황	31.5% <	55.1%	• 연계 교통 정보
	19.7% <	65.2%	• 연계 교통 정보

                    11

        11   ,
        ,   .

4.4.

                                                                                32.8%
                                        24.6%   .

                    ,   ,

                                                                                                .

전혀 사용할 의향이 없음 8.2% — 22.6%
사용할 의향이 거의 없음 14.4%

보 통 9.5%

사용할 의향이 약간 있음 24.6% — 35.1%
사용할 의향이 매우 많음 10.5%

서비스의 수준과 서비스의 종류를 보고 결정함 32.8%

간단 명료한 정보 50.2%
실시간 제공되는 교통정보 41.6%
→ 간단한 정보와 실시간 제공하는 교통정보에 대한 선호도 좋음

모순이 없고 정확성이 높은 정보 32.8%
여행 목적에 맞는 개별화된 정보 27.2%
지도 정보와 같은 그래픽 정보 24.9%

다양한 상황 파악이 가능한 많은 메시지 정보 16.7%

13

5.

'　　　　　　　　　　　', '　　　　　　　　　　　',
'　　　　　　　　　', '　　　　　　　　' 4

'　　　　　　　　　　', 　　　　　　　　　　,
4 　　　　　　　.

　　　　　　.

,

.

.

,

.

1. 　　　　　　, "　　　　　　　　", 2002.
2. 　, "　　　　　　　　　　", 2003
3. Ogino, T (1998), "In search of ARTS", QR of RTRI, Vol 39, No 4.
4. Ogino. T (2003), "A realization of Information and Guidance Functions of CyberRail", RTRI, Vol. 17. No. 12
5. Fukasawa, N (2003), "Customer satisfaction and convenience of Information Service", RTRI, Vol. 17. No. 12
6. China Academy of Railway Sciences(2003), "The detailed service architecture of China-National RITS", 2003,