

Customers' awareness of amenity



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The Frontier Service Development Laboratory has been conducting various investigations and studies in order to provide comfortable station space that meets diversified customer needs. Part of our activities is to conduct group interviews to find out how station users evaluate the station environment. This study indicated that potential as well as existing amenity needs that customers have can be categorized into six groups: mental comfort, convenience, user-friendliness, security, enjoyment, and emotional attachment.

● **Keyword** : station, amenity, evaluation grid method

1 Introduction

Today, the importance of the "station" in cities has been rediscovered, and stations are required to change from simply being a place where "people pass through" on the way to their office or school to a functional place where "people gather."

The study in this paper attempts to discover the right direction for future station space restructuring through investigating potential as well as existing amenity needs of station users. As the first step, we review the methodological characteristics and study results of the group interviews conducted using the evaluation grid method in order to discover how users evaluate the station environment.

2 Method

2.1 Use of the evaluation grid method in group interviews

The evaluation grid method is characterized by its ability to powerfully and hierarchically extract the needs of users of a particular environment through individual interviews, and this method has been applied in various fields. However, this investigation attempts to understand the overall image of user needs instead of needs of individual users, and thus a series of individual interviews is not the most suitable method in terms of examination efficiency. Therefore, as a solution to this efficiency problem, we employed a new attempt at using the evaluation grid method in group interviews.

The most significant characteristic of the evaluation grid method is that it activates the evaluation system (a part of the system which is related to evaluation judgment) through comparative evaluation of

multiple subjects, allows verbalization of such evaluation system by asking reasons for results of comparisons while the memory is fresh, and extracts a specific evaluation system. The series of activities described above must be done individually, and it is difficult to apply them to a group of people. Therefore, in this study, the participants were given a memo pad to record the results of the individual activities and then made a presentation of the results. Based on the presentations, then, the results were again discussed by the group of participants. As for "laddering (clarifying relationships between items)" of superordinate concepts and subordinate concepts of the evaluation items, which is another characteristic of the evaluation grid method, the procedure was processed when the presentations were made. Not only the presenter, but also the other group participants were allowed to speak, and all the opinions expressed were recorded as items to be used in the laddering procedure. In this way, the results of individual activities, opinions expressed in association with presented results, and the laddering results were all recorded as group needs irrespective of speakers. When the data was analyzed, each group was treated as the minimum unit.

2.2 Procedure

The study sample was designed as described in Table 1, taking the highly public nature of station environment into consideration.

The detailed study procedure is described in Table 2. The basic flow is as follows: (1) each interview session starts with negative evaluation of the station environment, since individual differences are expected to be small for negative opinions; (2) then user needs, which have higher added value than negative evaluation, are

extracted. The participants will compare and evaluate ideas for future stations and have free discussions on ideal stations in the second half of the study. These activities are for extracting potential needs. Specifically, 13 panels (refer to Figures 1 to 4 for examples) are prepared, and they are presented and described for each group for evaluation.

Table 1: Overview of respondents

1) They have to be regular railway users in the metropolitan area.
2) Group structure:
-> Respondents in their 20s to 30s, in their 40s to 50s, and in their 60s or older (3 categories in total) x 2 categories (male / female)
-> The above 6 categories x 2 groups x 6 respondents: 72 respondents in total
3) In terms of rediscovery of station environment, each respondent was asked to take pictures of the parts of the station environment that they thought would raise corresponding issues.

Table 2: Overview of study procedure

1) Evaluation of the stations they dislike
-> Each respondent listed three stations that they did not like, and wrote down the reason on the provided memo pad (individual activity)
-> Each respondent made a presentation of their activity result (laddering + free discussion at the same time)
2) Evaluation of the stations they like (the same procedure as 1) above)
3) Evaluation of the photographed stations
-> Additional points of evaluation were provided for evaluation of station environment (laddering + free discussion at the same time)
4) Evaluation of panels with future station ideas (the same procedure as 1) above)
5) Discussion on ideal stations (free discussion + laddering)

3 Result and discussion

3.1 The station environment evaluation structure model

Figure 5 on page 32 shows the summarized version of the overall evaluation structure model in which the evaluation structures extracted from each group were plotted. Despite the fact that it was the first attempt to conduct such a study, each group session was



Fig.1: A station rich with examples of nature such as plants or a water fountain



Fig.2: A station in which various types of information is projected on station walls or platform walls



Fig.3: A station in which passengers can use trains without using tickets



Fig.4: A station that serves as a landmark in the town

highly active and a large number of points of evaluation were obtained. A large number of potential needs (shaded items in the diagram) were also obtained due to the use of future station ideas as food for thought. Therefore, the validity of the series of study procedures using the evaluation grid method in group interviews has been confirmed.

3.2 Results of the group interviews

In this section, ideas and images that received high evaluation as a result of group interviews are introduced.

A. A station rich with nature such as plants or a water fountain (Figure 1)

The concept of this station is a station where "users can feel different seasons and nature." It is not a simple matter of planting some plants or trees, but rather it attempts to allow users to be exposed to nature such as plants, streams, sunshine, or wind. This idea was strongly supported by a wide range of ages. Examples of opinions provided by the participants are as follows:

- I will feel relaxed when meeting someone or killing time. It will give me room to breathe.
- The greenery will make me feel relaxed. I will not feel irritated even when waiting for someone.
- I will like the openness I can feel in this space.

At the same time, there were contrasting opinions such as that funds must be used to pursue convenience of the space instead of installing natural objects such as plants or a water fountain. However, the idea

of emphasizing nature is believed to be strongly accepted because it had benefits for users since this station will be: 1) relaxing, 2) open, and 3) fun.

B. A station in which various types of information is projected on station walls or platform walls (Figure 2)

The concept of this station is a station in which useful information such as train operation information or weather forecasts is shown on a large display. This idea was strongly supported by the group of males in their 20s and 30s, and groups of females in their 20s and 30s, and also 30s and 40s. Examples of opinions provided by the participants are as follows:

- A station is a practical facility. If something happened or something important is going to happen, it should be communicated to the users as soon as possible.
- I would like information on sports results, news, weather forecasts, and special sales at various shops. It will be a good way to kill time.
- If I miss an audio broadcast, I have to wait for the next round.
- The installation point will be highly important. I think it should be installed outside the station, a little bit away from the ticket gate.

The overall evaluation of this idea was high, but there was also the opinion that information and commercials (advertisements) should be separated. However, the idea of emphasizing the display of information is believed to have benefits for users since this station will be: 1) convenient, 2) fun, and 3) suitable for killing time.

C. A station in which passengers can use trains without buying tickets (Figure 3)

The concept of this station is that passengers can use trains smoothly. For example, an electronic ticket using IT will allow automatic ticketing when a holder goes through the gate. This idea was strongly supported by groups of males in their 20s to 30s, and 40s to 50s. Examples of typical opinions provided by the participants are as follows:

- It will be convenient when traveling with children or when carrying large baggage.
- It will not be troublesome.

Although convenient, there was the opinion that this may raise a health issue since this system uses electromagnetic waves. However, this idea is believed to have benefits for users since this station will: 1) be convenient, 2) reduce congestion, and 3) allow easy traveling.

D. A station that serves as a landmark in the town (Figure 4)

The concept of this station is that a station will serve as a historic or traditional symbol of the town. This idea was strongly supported by groups of both males and females in their 60s. Examples of typical opinions provided by the participants are as follows:

- It will be good if the station can express the characteristics of the area.
- It will be a good opportunity to know the history of the area and teach it to children.
- The symbol will remain in our memory.

At the same time, there were opinions such as "it should not be newly created." However, the idea of emphasizing the landmark status is believed to have benefits for users since this station will: 1) become a symbol or an object that represents the pride of the town; and 2) have friendly characteristics.

3.3 Discussion

As a result of the group interview study, the evaluation structure model as shown in Figure 5 was obtained. This model indicated that potential as well as existing amenity needs that station users had could be categorized into six groups. Details of each group are described in the following section.

- Mental comfort

As seen in the model, "mental comfort" experienced at stations can be roughly categorized into: 1) benefit obtained by improving functions that are related to travel inside station buildings such as "smooth travel" and "no getting lost;" and 2) benefit obtained by reducing physical loads such as "barrier-free facilities." When the subordinate concepts for 1) above were examined, there was not only "understandability of indoor displays" but also "understandability" of places, "neatly organized stations," and "smooth and unhindered flow of passengers," all implying "visibility" in space. This suggests that users can experience mental comfort by providing them with simple and visible station space.

- Convenience

Evaluation of station convenience is characterized by emphasis on "time saving." One of the factors suggested by participants that can contribute to time saving is "arriving at a destination without getting lost," but at the same time, needs for being able to make effective use of time such as "there are places to shop and eat in stations" is also

worth noting.

- User friendliness

In this category, criteria such as "barrier-free designs are employed" or "it is easy to ask questions" are listed as needs. This suggests that it is important to create improvement plans with a good balance of both abstract as well as concrete aspects.

- Security

Many of the suggested evaluation criteria are related to "space." "The space is not too small or pressuring," "it is possible to see the entire platform," and "people do not bump into each other" are some of the examples. Here, too, the importance of creation of station space with good visibility is suggested.

- Enjoyment

For this, too, "enjoyable time" and "space with good visibility" are the factors that make users feel comfortable. Furthermore, some users enjoy "discovering" something new at stations. Therefore, it is necessary for stations to continuously develop and improve their space so that they will not be boring for the users.

- Emotional attachment

Points of evaluation here contain many items regarding "form." "Symbolic station buildings," "unique stations," "design of stations" are some of the examples, reconfirming the importance of the design of stations. Although not mentioned in the group interviews, emotional attachment is not always about "form" but could also include "material" factors. For example, it is possible to use "materials" unique to that area in order to create a station building that "represents the characteristics of the area" or that "harmonizes with nature and the town."

Also, through the study, we were able to learn that the "thermal, light, and audio environments" of stations and the "visual environment" such as indoor displays strongly influenced amenity evaluation. So the Frontier Service Development Laboratory will conduct examinations and studies in order to better understand and solve the current issues and also will conduct research in cooperation with various other fields in order to achieve a higher amenity level.

References:

- 1) Architectural Institute of Japan: "Study on Methodology of Environmental Psychology for Creation of Better Environments," Gihoudou, 2000.

4 Conclusion

In this paper, we have categorized potential user needs for comfortable stations, and discovered an approach to create comfortable station space. Through the study, we have found that customers had high demands, such as introduction of natural elements, for instance greenery and light, or creation of stations that can proudly serve as a symbol of the area. They will become important tips when designing future station space.

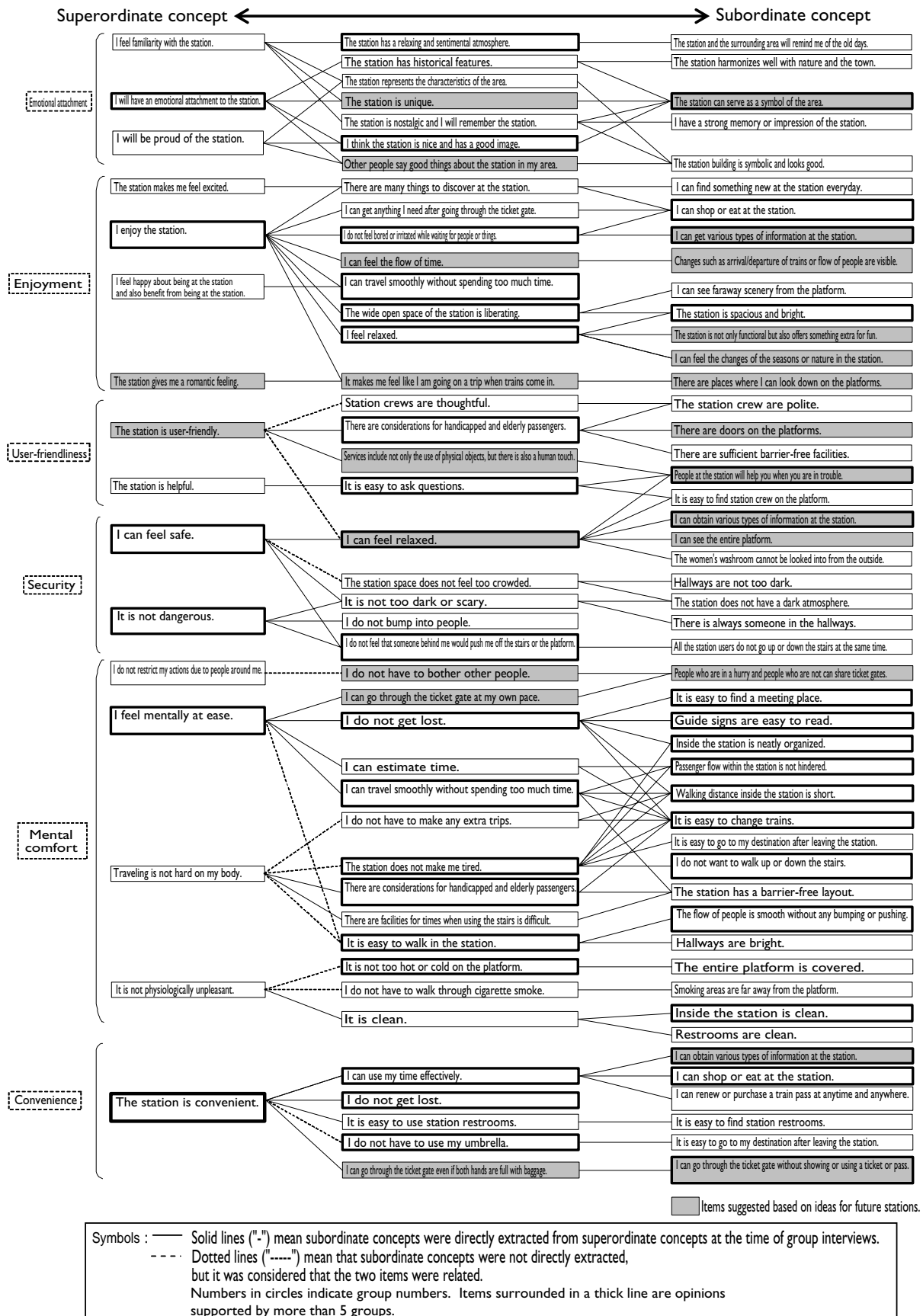


Fig.5: The overall station environment evaluation structure model (summarized version)