

Title	仮想空間における所有物の情報を介したコミュニケーションメディアの開発と評価
Author(s)	小山田, 泰史
Citation	
Issue Date	2003-03
Type	Thesis or Dissertation
Text version	author
URL	<a href="http://hdl.handle.net/10119/441">http://hdl.handle.net/10119/441</a>
Rights	
Description	Supervisor:杉山 公造, 知識科学研究科, 修士

# A study of communication media in a cyberspace using the information of user's possessions

Hirofumi Oyamada (150017)

School of Knowledge Science,  
Japan Advanced Institute of Science and Technology

March 2003

**Keywords:** informal communication, interest awareness, the place of individual activity, possessions.

This research aims at evolving social relationships among community members in a distributed environment. For this purpose, we pay attention to individuals' possessions that exist in individual activity spaces. We propose a way for supporting communication via members' possession information that can realize 'Interest awareness', develop an online-communication media called POP, and evaluate its usability.

Currently offices tend to be distributed and individuals' activity spaces in an office tend to be personalized. This means that we might be able to get specific and important information about interests, favorites, and situation of each individual through possessions such as books, CDs, software etc. being in the individuals' spaces. According to this expectation, we first made questionnaires to inquire the adequateness of the expectation and obtained the following results from the collected opinions.

- (1) The possession information reflects interests, favorites, and situations of individuals.
- (2) Even if no conversation, they can understand and communicate each other through the information instead of a conversation.
- (3) This information is used in opportunities other than in the same time and place.

Based upon these results we proposed a way for supporting communication enhancement consisting of facilities for sharing the possession information and notifying induced interests. The former facility is called 'information share-type awareness' and the latter 'activity-type awareness'. Both awarenesses are integrated as term 'Interest awareness'. A system POP to implement the Interest awareness was developed, of which functions and characteristics are as follows (the first two correspond to the information share-type awareness and the last two the activity type-awareness):

- (1) The information of individual possession can be shared among members.
- (2) To notify interests induced by the shared information action INTARA-KUTO is implemented.
- (3) When speaking to other members, a recipient can explicitly grasp a trigger possession beginning the talk.
- (4) Simple, dynamic, and translucent "balls" were used as media expressing the possessions from an aesthetic viewpoint.

Evaluation experiments were carried out, where 3 subject communities used POP for one week. From analyzing log data of operations and pre-and after- questionnaires, we obtained the following suggestive results:

- (1) Current situations and interests of individuals can be grasped by sharing the possession information each other.
- (2) There exists a high relevance between the numbers of times interacting and interacted. This is because members who were often interacted by others tended to often interact to others. We can find in results of questionnaires that each member feels pleasant when interacted by others.
- (3) A member who was less interacted tended to register much more possession information. This means that each member has such a feeling to be interacted by many other members.
- (4) Most of members felt pleasant feelings in doing operations for interacting and registering.

As the conclusion of this research, POP is effective to support the information share-type awareness and the activity-type awareness. Moreover, a way without direct conversations as proposed here can be effective to well communicate each other pleasantly and joyfully. Finally we can conclude that our method is effective to evolve social relationships among community members in a distributed environment.