Use Case: Mobile Content Recommendation System

Tony Lee, Jun Hyung Ahn, and Lucy Cho, Saltlux, Korea

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Introduction (Background)

The IP Multimedia Subsystem (IMS) and similar mobile telecom environments provide mobile telecom services on an IP network base. Thus large capacity content and services are delivered to mobile telecom users. Through this system mobile telecom users can receive seamless service regardless of whether it is wireless or not. Contents and service providers can expand on current business plans and launch new business plans. Mobile businesses can give additional value to its services.

However, this type of contents analysis can only figure out what types of contents and services that users are looking for. The development process has to look deeply into what the user is actually requesting from these contents and services. Consumers can however, receive many different kinds of content and services and feel much satisfaction. The development and delivery process however has to be looked at with more detail and preparation. KTF (Korea Telecom Freetel) has therefore realized the need for an intellectual content recommendation system.

General Description

Challenge

To increase the user friendliness in terms of the content and services, the correct delivery system has to be fitted for each user and the appropriate content must be delivered to each user at the appropriate time and using appropriate means. However, with the present mobile system, there are limitations to providing an integrated system. Furthermore the current mobile system could not provide the environment for more intellectual services. Thus, it is necessary to have a system that can provide identification between user preferences and user relationships, and provide the information to each user's service in analyzed and standardized way to supply customized contents and services.

The Solution

Individualized user preferences are identified through analysis of both wired and wireless use histories. Identified preferences are used to determine suitable content recommendations using techniques of content-based filtering and collaborative filtering. It enables content recommendations suitable to the user's existing situation by application of recommendation policies according to the user's current situational information such as user preference, time, place weather, schedule, etc. Through reasoning of the social relationship between users, stereotypes of subscribers whose preference could not be retrieved can be assumed and recommended, or contents of other subscribers who are related to the current subscriber are recommended.

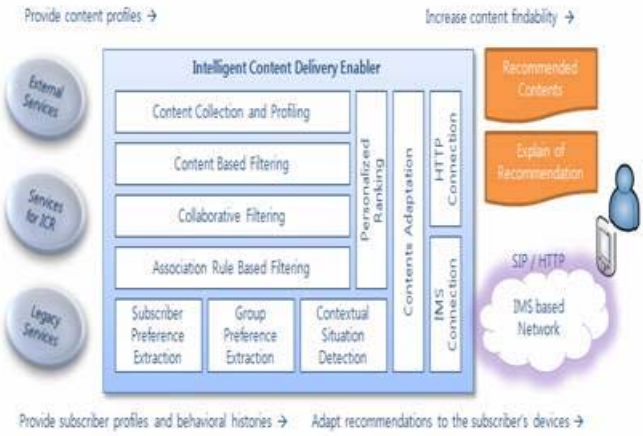

Figure 1: System Architecture

Key Benefits of Using Semantic Web Technology

Context-awareness-based content recommendations through consideration of physical, theoretical and social situations of preference of subscribers, groups and stereotypes enables the optimization of access costs and increases the usability and convenience of information discovery through providing customized contents easily and conveniently to users.

Additionally, because the service provider adjusts to the needs of the user, and provides intellectual content, it increases its competitiveness and is able to not only maintain its customers but also increases its market share.

Next Steps

This project has demonstrated the potential use of semantic technologies. The commercialization of the technology and fielding of diversified recommendation services will be pursued next in conjunction with the currently operated commercial system.