

Centralized Profile Translation Architecture Using Enhance Security

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Abstract— now a day the value of web services are going to increase due to e-commerce. There are many service providers like eBay, Amazon where user need to create their own profile within service provider domain. The profile is stored locally within proprietary personalization architecture at the service provider under his control. There are many advantages and disadvantages of such a system. Replicating the same information of user profile among multiple service providers decreases consistency of user profile and increase storage overhead. Consistency increases by centralizing the information, but there is again issue of privacy and security. User must keep trust on the service providers that their system is safe from hacking. In this survey paper we describe techniques for collecting information about users, representing, locating and building user profiles in personalized architecture by eliminate the issue of privacy, inconsistency and integrity. All this things are done by keeping the full profile of the user within user domain is considered here. This paper will make an extensive review of profile translation architecture by separating user profile with structure profile. This concept is especially interesting for future mobile applications.

Keywords— Web service, e-commerce, personalization, user profile, structure profile.

I. INTRODUCTION

The growth of the Web services today is simply phenomenal. It continues to grow rapidly and new technologies, applications are being developed to support end users modern life. The Internet has enabled and accelerated new forms of human interactions through instant messaging, Internet forums and social networking. Online shopping has boomed both for major retail outlets and small artisans and traders. Benefits of e-commerce are overwhelmingly varied and the intensity of internet usability has meant that information sharing is greatly achievable. Profile act as a cornerstone for web services. There are many service providers like eBay, Amazon where user need to create their own profile by submitting their personal information. This profile is stored locally within proprietary personalization architecture at the service provider under his control. User must keep trust on the service providers that their system is safe from hacking. Replicating the same information of user profile across multiple service providers decreases consistency of user profile. In this paper we focus on the point of profile storage location, user profile personalized architecture and security provide to the profile are consider.[1][6][7]

Personalization architecture increases the value of web services and has many benefits for user as well as service provider. The benefits for users are:

- A better user experience in a different range of situations.
 - Profile data will only need to be defined once. Users will not have to re-enter their information each time they acquire new services and devices.
- The benefits for service providers are:
- Satisfied customers' needs that will cause to better user loyalty.
 - Require less service development time.
 - Larger user segments reached more easily and quickly.

II. PERSONALIZATION

In general personalization is a process of tailoring pages to individual user's characteristics and preferences. It collects behaviour of individual users and helps it for future recommendation system. There are three categories of personalization:

- Profile based personalization.
- Behaviour based personalization
- Collaboration based personalization.

The technology used in personalization includes collaborating filtering, user profiling and data analysis. In collaborating filtering, filter is applied for selecting relevant data which can be used in specific e-commerce experience of a customer. User profiling uses data collected from different sites and create personalized web page which can be used to predict future interaction by data analysis tools. The heart of personalization architecture is user profile.[6][9].

III. CREATING USER PROFILE

User Profile is nothing but a formal summary or analysis of user information which representing distinctive feature or characteristics about user. This information is accessed by key value pair. Profiles contain Meta information (i.e. data about data) to augment information. Such Meta information could be used to assess the user information [1].

The information collected either by implicitly or explicitly. Implicit collection of information contains many techniques like through Browser Cache, Proxy Servers, Browser Agents, Desktop Agents, Web Logs, and Search Logs. Many personalization architecture use browser agent base technique because agent place within user desktop computer. It also gives fewer burdens on the user, and it

automatically updates as the user interacts with the system. Profile constructed manually by user or expert or it will construct automatically. Some approaches use genetic algorithms or neural networks to learn the profiles [2].

IV. CREATING USER PROFILE

There are three common ways for storing and managing user information in personalized system. Server based architecture where user profile both stored and managed at server. This system is also called as centralized system. The need of centralized system is to identify the user for correct information. There is no need of user profiles to transit through the network but there is issue of security and privacy.

In cookie based architecture, user profile stores on the client side and manages them on server side. The main advantage of such architecture is the distributed nature of the storage, which frees the service provider from supplying software and disk space for the database, but the transmission of the user profile between its storage location and the management location increases the response delay.

Last is client based architecture where user profile manages and stores on the client side, such a system is also called as client-server architecture. For managing the information of user profile there is user profile management agent. Agent is responsible for managing and storing the user profiles as well as providing personalization support to Web applications [7] also we can create middleware for secure management [8].

V. RELATED WORK

Traditionally there are many systems where user profile stored at different service providers under their control. This causes security issue. In the paper "Client –Side Profile Storage: a means to put the user in control" author gives the solution for security issue. They propose a distributed client side profile architecture to personalization. They consider that data should be stored locally within user domain, permitting personalized actions even if the device is not connected to a network. This client side user profile breaks into number of parts. These parts of the profile is distributed, replicated and kept consistent on user devices. Thus the user can access any profile data from any device in a trusted way. Device should manage all the profile information but such system contains some disadvantages that, if someone want to change any data of a profile then they have to make sure that changes should be occurred across all the replicated parts which contain those data[7].

In the paper "Architecture for profile translation" authors combine both technique i.e. centralizing and client base architecture for increasing the consistency and illuminating the security issue. Technically they separate user information into user profile and profile structure (view). User profile keep within user domain and profile structure keep centrally i.e. towards service provider. The different profile structures would require for different, independent profiles. The transparent linkage between structure and information created which will be free of context and semantics [1].

VI. PROPOSED SYSTEM

In the proposed system architecture, user first have to register himself in to the main profile by filling detail personal information like name, address, mobile number, bank detail, educational detail etc and generate one Id and password. At the time of login into web service site user have to enter this Id and password. If both the entered things will be correct then one OTP send to the user mobile. The service provider can read the main profile data only after entering the OTP into server login site by the user.

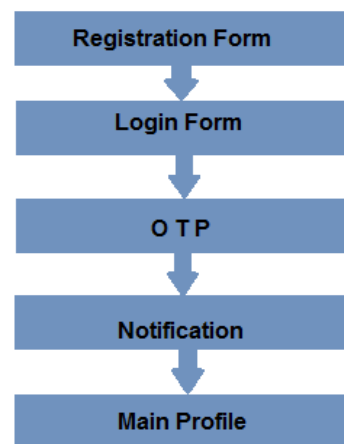


Fig. 1. Proposed System Architecture

VII. GOAL

The goals of the propose system architecture is:

- To develop unique profile to access multiple accounts. So user has unique id and password to access his unique profile. Central database is the important part of the system.
- To achieve the flexibility in accessing the different account using Unique profile which can provide the different option like Update etc.
- If anything update in central database, it reflects on all other account. Providing single interface for multiple account.

VIII. SCOPE

This architecture is applicable where single organisations has multiple offices located at different cities and have different account with same information. So these information is redundant to everywhere which lead to wastage of memory to avoid these drawback of existing system the new developing profile translation architecture using enhance security is developed. It helps to manage multiple accounts using single main account. This system is also useful for future mobile architecture.

IX. ASSUMPTIONS AND DEPENDENCIES

Assumption for web application is that user has access to multiple accounts through unique profile. this system provide enhance security using OTP, so user is more secure.

The dependency is depending on list of account displayed to the user, the user will decide which account to use

X. CONCLUSIONS

For using any web service user first need to create their own profile by submitting personal data. Traditionally there are many systems where user profile stored at different service providers under their control. This causes many issues like security, inconsistency of user data, wastage of memory due to storing similar data across many sites etc. These issues can be eliminated by centralizing profile architecture. Personalization plays important role in centralized profile. The main aspect of the proposed system is to make the unique profile to access user multiple accounts. The system is design in order to make a centralised database to reduce the complexity of database .It will helps user to work conveniently with different account by using single profile. And the user will more secured due to the OTP which he has entered while login.

REFERENCES

- [1] Bjoern Wuest, Olaf Drogehorn and Klaus David, "Architecture for Profile Translation" IST summit 2012.
- [2] Susan Gauch, Micro Speretta, Aravind Chandramouli, and Alessandro Micarelli, "User Profiles for Personalized Information Access".
- [3] Laurent Frelechoux and Tomonari Kamba "An architecture to support personalized Web applications- *A User Profile Management Proxy*".
- [4] Ziegler M., Muelle W., Schaefer R., Loeser C., "Secure Profile Management in Smart Home Networks", *IEEE Database and Expert Systems Applications*, ISSN :1529-4188, ISBN:0-7695-2424-9, Aug. 2005.
- [5] Tatiana Kovacicova, Françoise Petersen, Mike Pluke, Valentin Alonso Alvarez, Giovanni Bartolomeo, Antonella Frisiello, Erik Zetterström, Scott Cadzow, "Personalization and user profile standardization", ETSI STF 34, European Telecommunications Standards Institute Sophia Antipolis France.
- [6] H. Hirsh, C. Basu and B. D. Davison, "Learning to personalize", In *Communications of the ACM*, Vol.43.8, p. 102-106.
- [7] S. Riche, G. Brebner, M. Gittler, "Client-Side Profile Storage: a means to put the user in control", Public Technical Report, Hewlett Packard Laboratories Grenoble, November 2012.
- [8] Poonam N. Railkar, Parikshit N. Mahalle, "Proposed secure context aware profile translation" *IJITS*, Vol. 1; No. 2: ISSN: 2277-9825.
- [9] www.wikipedia.com
- [10] R. Vanathi, L. Dhanam, K.R. Senthilnathan, M.S. Vinu, "Secured and Reliable Data Transmission Using Lychrel Numbers RGB Colors and One Time Password" *IJCSMC*, Vol. 2, Issue. 10, October 2013.
- [11] Salem Aljareh, Anastasios Kavoukis, "Efficient Time Synchronized One Time Password Scheme to Provide Secure Wake-up Authentication On Wireless Sensor Networks" *International Journal Of Advanced Smart Sensor Network Systems (IJASSN)*, Vol 3, No.1, January 2013.