

Increasing quality of life through Web 3.0

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Abstract— The Web is entering a new phase of evolution. With the help of Web 3.0 we will use the internet to increase our overall quality of life. Web 3.0 is just that next advancement. Web 3.0 has been also linked to a possible convergence of Service-oriented architecture and the Semantic web. Developments in improved reality, personal learning networks, coding language, and wireless devices will describe the possibilities of Web 3.0. The Semantic Web 3.0 and its Web Services are transforming the Internet from a network of information to a network of knowledge and services. This new phase of evolution has quite a different focus from what Web 2.0 has come to mean. This paper is concerned with Overview of semantic web generators & deeply description Service web 3.0 is given with its scope and Advantages. Web 3.0 will be smarter in how it retrieves and presents the correct information to participants.

Keywords— Web services, Semantic Web, Semantic Web services, Difference between web Generations, Semantic Web 3.0.

1 INTRODUCTION

Web 3.0 is used to describe the evolutionary stage of the web that follows Web 2.0. Technical and social possibilities identified in this latter term are yet to be fully realized the nature of defining Web 3.0 is very speculative. Generally it refers to aspects of the Internet which, potentially possible, are not technically or practically feasible at this time.

With respect to artificial intelligence direction, Web 3.0 can be the realization and extension of the Semantic web concept. Academic research is conducting to develop software for reasoning, based on description logic as well as intelligent agents, one of its example is, the World Wide Mind project. These types of applications can perform logical reasoning operations using sets of rules that express logical relationships between concepts and data on the Web. Sramana Mitra has different viewpoint that Semantic Web would be the essence of the next generation of the Internet and proposes a formula to encapsulate Web 3.0. Web 3.0 has been also linked to a possible convergence of Service-oriented architecture and the Semantic web. Web 3.0 is also called the "Internet of Services", i.e. like the human readable part of the web there will be machine accessible SOA services which can be combined/orchestrated to higher level of services.

2 OVERVIEW

Web 1.0 was the earliest generation of the Web. For the duration of this phase the focus was primarily on building the Web, making it available, and commercializing it for the initial time. Key areas of attention centered on protocols such as HTTP, open standard markup languages such as HTML and XML, Internet access through ISPs, the first Web browsers, Web development platforms and tools, Web-centric software languages such as Java and Javascript, the designing of Web sites, the commercialization of the Web and Web business models, and the development of key portals on the Web.

The Web is entering a new phase of evolution. There has been much argument recently about what to call this new phase. Some would not choose name it all, while others suggest continuing to name it "Web 2.0". Though, this new phase of evolution has quite a different focus from what Web 2.0 has come to represent.

The read and write websites, blogs, web applica-

tions, rich media, viral media, tagging or Folksonomy are used by Web 2.0 at the same time as content sharing and focusing on communities. The Web 3.0 standard uses semantic web, widgets, drag and drop mash ups, consumer behavior or Meonomy, ads, user engagement, unites dynamic content and revolves around individuals. Web 3.0 utilizes the 'Data Web' technology which is having data records that are publishable and reusable on the web with formats like RDF, XML and micro formats. Web 3.0 is the foundation to complete semantic web, which can give new application operability, combination of data and makes it overtly linkable and accessible in the shape of web pages. The web 3.0 standard further depicts the most current trends for artificial intelligence. Web 3.0 intends to foreground intelligence in an organic manner by the interaction of people.

TABLE 1:
Web Services Generation Overview

WEB 1.0	WEB 2.0	WEB 3.0
Mostly Read-only	Wildly Read-Write	Portable & Personal
Company Focus	Community Focus	Individual Focus
Home pages	Blogs/wikis	Lifestreams/Waves
Owning Content	Sharing Content	Consolidating Content
Web Forms	Web Application	Smart Applications
Directories	Tagging	User Behaviour
Page Views	Cost per Click	User Engagement
Banner Advertising	Interactive Advertising	Behavioral Advertising
Britannica Online	Wikipedia	The Semantic Web
HTML/Portals	XML/RSS	RDF/RDFS/OWL

3 SCOPE

Computing is entering a recent era that brings revolutionary changes at many levels, including infrastructure, hardware, middleware, and end-user software. Speedily advancing ICT trends such as service orientation, smart mobile devices, cloud computing, sensor networks, user-generated content and the Semantic Web transform the Internet into a global platform of knowledge and services. A big challenge in this context is to set up an initiative that coordinates and supports ongoing research and development efforts in the area of Software and Services, particularly those that utilize semantic technologies, towards the realization of this vision of the future Internet of Services.

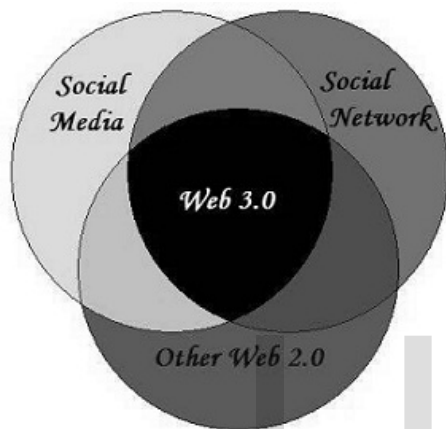


Fig 1: Scope of Web 3.0

Service Web 3.0 addressed this challenge through a comprehensive, sustainable program encompassing research coordination and alignment, dissemination and awareness raising, community building and networking activities. In particular, Service Web 3.0 played a relevant role in the collaborative effort initiated by the European Commission to create and develop the scientific and technological building blocks for the next generation of the Internet, known as the upcoming Internet.

The visionary management role of the Service Web 3.0 project formalized through prestigious positions held by senior members of the consortium such as Future Internet caretaker, conference chair and organizer, standardization technical group and working group chair, as well as steering chair for several other initiatives which in concert with three road mapping workshops led to the publication of several roadmaps and collections of roadmaps focusing on future development and adoption of networked services and semantic technologies.

The successful organization of the upcoming Internet Symposium and the organization of several academic and industrial conferences stand as highlights in reviewing Service Web 3.0's provision of professional forums and channels of dissemination. At last, the project's sustainable community networking infrastructure and support efforts were most visible in the established Future Internet Interest Group, the Se-

semantic Technology Forum's Facebook group, the semantic technology YouTube channel broadcasting Service Web 3.0's Future Internet video, and the establishment of the STI Symposium, to be hosted yearly as an international community forum for showcasing achievements and establishing beneficial relationships with fellow researchers and developers in the field of semantic technologies.

4 ADVANTAGES

- Improvement of a roadmap with key research challenges for Semantics and the Internet of Services;
- Authoring and editing of reference publications, most remarkably books on the Future Internet, Semantic Web Services and semantic technologies;
- Association and support for 14 conferences, 14 workshops, 3 tutorials, 5 summer and winter schools, 10 keynote and invited to talks, and 3 forums and unique sessions on Future Internet related topics;
- Improvement of advertisement and information material comprising 6 scientific publications, and of "The Future Internet Video" (now with 130K views), in order to raise awareness, to encourage technology adoption, and to support community building;
- Motivating and maintaining the Future Internet Interests Group.
- The ability of obtaining contextual information from a web search
- The capability to obtain information drawn from a variety of previously incompatible or walled applications or sources
- The engagement of all types of devices and machines in the data creation, data use, and communication process that informs our daily lives, our work, and our businesses
- The Web 3.0 for clients is that their interactions with their devices and applications will be personalized.
- The ability to organize information contextually based on natural language processing and semantic technologies, shared with user-defined criteria, will make searches far more powerful than is possible with today's algorithms.

5 BENEFITS FOR CONSUMERS & BUSINESS USERS

One of the major benefits of the Web 3.0 for consumers is that their interactions with their devices and applications will be personalized. Companies will be able to take benefits of the many intriguing features and capabilities Web 3.0 brings to build better services and relationships with their customers. In the near future, services made achievable by the intelligent web will begin creating new and creative interactions between customers, their devices, and their applications. The impact will be felt in the social networking sphere, where applications will have a improved ability to make use of customer-generated content and opinions; in the mobile web, which will

become the predominant means of accessing content and services; and even in the entertainment sector, where televisions and gaming devices will add intelligent services such as the ability to recommend media to customers based on past usage and preferences or interactive features that allow customers to create their own content.

The ability to organize information contextually based on natural language processing and semantic technologies, joint with user-defined criteria, will make searches far more powerful than is possible with today's algorithms. Data output will be more personalized and common tasks and activities will be more intuitive and easier.

Performance and location aware applications will be enhanced by the enriched context made available to the application and by automated interactions with and between more types of devices. Governed by an individual's preferences, intelligent agents will be capable of act on behalf of the user. Early illustrations of these capabilities created with current technology include smartphone applications that consider a user's location and personal interests to recommend restaurants or social venues. Extra examples include services that make it possible for a smartphone to communicate with a user's PC in the workplace to log their arrival at work and authenticate their access to the network, or smart-grid applications that alert a customer if an energy appliance is malfunctioning.

As the "Internet of things" builds and expands and a consortium of service providers form to develop the cross-platform interactions between data and services that the Web 3.0 facilitate, these types of personalized, automated applications will become more prevalent and powerful.

As recent devices and software enabled by Web 3.0 tools and techniques become an integral part of the business process, individual companies will find new opportunities to increase efficiencies, build intelligence into their business processes and strategies, and better target their customers' and employees' needs. For example, the barriers that previously separated business applications and communications networks will start eroding to make business processes more fluid for users as they move in and out of virtual and physical work environments. Workflows will turn into simplified by the automation of common workday tasks and activities. Business decisions will be grounded on more and better data generated by intelligent systems and connected devices implementing both inside and outside the corporate network. The improved access to customer data and ability to reuse it in different arms of the enterprise will lead to the development of new solutions that can improve customer relationships and sales. In particular, Web 3.0 can be viewed as a business intelligence (BI) engine. It is well known that corporate BI initiatives are hampered because conventional IT systems are not able to integrate information from private or dissimilar data sources to derive a holistic view of the organization. While most corporations have a minute number of extremely focused BI requirements, individuals within a company might have multiple needs to perform analytics, data mining, and reporting to support corporate decision making. The ability to access formerly unavailable information and funnel it into an auto-

mated procedure or mashed-up application will add value to company information and empower employees to better serve the company. Companies will also discover numerous, new opportunities to tailor solutions to their clients based on the business intelligence that Web 3.0 tools and technologies provide.

6 WEB-ENABLED REAL-TIME PRODUCT

Web 3.0 can enable communication between private applications and retail lenders. Presently, social media feeds pertaining to lenders are generally monitored actively by an in-house team to provide solutions and service to clients. This can be accelerated by replacing the team with real-time engines that "talk" to and interact with each other, thereby reducing attempt while increasing effectiveness. Request from social feeds can be assimilated by the engine, analyzed and included into the respective workflow engines of the lenders. Product offering are often trimmed by lenders to fit the requirements of customers. This often involves chalking if the clients needs make him eligible for a particular product group with Web 3.0, real time customization of the offered product will be feasible. The consumers needs and feedback through pseudo-conversation sites like twitter can be considered to customize the product in real-time.

7 NEW CONCERNS AND SOLUTIONS

The enlarged levels of access to information, new abilities to combine and share formerly incompatible data sources, and the pervasive use of connected devices and applications that will take benefits of this information in the Web 3.0 era introduce fresh trust and privacy concerns for consumers and business. In particular, the creation of new applications that merge public and private data for Web 3.0 services can introduce security issues that are more difficult and challenging than previously experienced. The use of intelligent agents to act on behalf of an enterprise or individual is furthermore expected to present new risks.

Trust and privacy concerns have already turn into evident in the consumer and media backlash against social networking sites. Hypothetical examples are also illustrative. For example, the smart grid, which will ultimately connect every house and even household appliances to the utility grid, generates continuous information about consumers' personal behaviors, not only their energy utilization but also data on the make and model of household appliances, which can be support warranty programs or notification of product upgrades. Potential misuse of data made possible by these and other initiatives in the Web 3.0 era, such as disturbing product marketing programs, could open up entirely new areas of privacy concerns.

On the other hand, the information resources and services that will become accessible in the Web 3.0 era may lead to an increasing number of more effective privacy and identity management solutions. Already, large organizations are banding mutually to create more open systems and standards to fight cybercrime and malicious behavior with more unified and automated methods.

Identity management solutions will become much more powerful, granular, and automated to make authentication and relations with multiple systems simple for everyone. Software-based information agents that use reputation systems and various forms of automation will be able to watch out for the best interests of their customers to help prevent unknowing use of a malevolent site or accidentally jeopardizing a public persona.

8 CONCLUSION

Web 3.0 will be more associated, open, and intelligent, with semantic Web technologies, distributed databases, natural language processing, machine learning, machine reasoning, and autonomous agents. Web 3.0 will more smartly retrieves and presents the correct information to participants. With Web 3.0 lifestyle will be improved. It has new Concerns and Solutions. With Web 3.0 real time customization of the offered product will be feasible. The development to Web 3.0 will yield enriched capabilities for individuals to use and create content and it will provide enterprises with substantial and numerous opportunities to grow their businesses and improve efficiencies.

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