UMA (Universal Media Application) Browser

Tim Bruysten¹, Frank Veit²
richtwert GmbH, Düsseldorf, Germany;
E-mail: ¹bruysten@richtwert.eu, ²veit@richtwert.eu

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Abstract: Most of the information on the world wide web is using the approach from the beginning, reacting on a user event to send a request for updated information to the server, which reacts with a new page to this request. This produces an user experience that feels sluggish and interrupts the user’s flow of thought. All this is based on restrictions from the past, where internet connections were slow, most of the information was available as text and the modern tools were still missing. The technical possibilities for creating a user interface for the world wide web have changed enormously in the past 5 years. The computer hardware got faster with a lot more memory available, internet connections speed has been multiplied and the browser’s functionality has been greatly enhanced. All this allows us a desktop like experience of web applications. And makes it possible to browse through the massive available information, enjoying a positive user experience. Tools like JavaScript, GWT, XML and the HTML5 and CSS3 standards, most of which already available in modern browsers, allow to rethink the way for accessing the data completely. Our approach to this is a web application named “UMA (Universal Media Application) Browser”, which takes full advantage of modern browsers functionality to provide semiantically usefull information to the user in an easy to use and very effective, dynamic user interface. And this not only for Computers, but also on Smartphones, Tablet computers and internet enabled TVs.

Keywords: www, web application, semantic data, information mesh, dynamic ui

INTRODUCTION

During the last two decades companies all over the world have tried to adopt to the internet. What they’ve found quite intelligent and forward looking solutions. But the web has evolved and the new challenges are not only “realtime” and “mobile”. The new challenges are a vast number of new devices with an even bigger number of new content-consumption and content-creation scenarios. And the networks with a hundred million users are just a click away. Any place. Any time.

As everyday new information is created, this new information is not new information of it's own. Every new information interferes with everything what exists. Information link and comment, they evaluate and promote. And they activate new recipients.

New information does not come alone. It comes with new layers of interaction and involvement. They raise the complexity of the knowledge and culture of our society.

CURRENT STATE

The Web is a no text-medium. Users want to have a fast overview about current topics and this should be presented visually. The current way to fulfill this request does not take advantage of the possibilities that are available today, especially in corporations. They made the jump from terminals to fat clients, but the applications look and feel all the same. Information is hidden behind columns of numbers and loads of text.

The UMA Browser strives to change that. First the fast, visual overview and always the backgrounds and deeper information at the fingertips of the user.

THE UMA BROWSER

The Principle

The UMA Browser is a platform independent concept. Currently running on desktop-pcs, laptops, subnotebooks, tablets like the iPad and multi-media-TVs. The UMA Browser offers the one simple and coherent way to browse endless amounts of heterogeneious contents. The semantic logic behind it is implicit in the visual interface and can be understood intuitively. No need to deal with complicated tools and options. The complexity remains hidden, doing its work on the UMA Browser’s backend. It can be applied to a wide variety of scenarios and business cases. It has the potential to become the standard interface for intuitively browsing media contents, just like underlined links are the standard for navigating hypertext.

The Mesh – a visual interface

The MESH is a centric visual user interface. The latest, most interesting or current search information is placed in the middle: This is the center-clip. Contextual information are arranged around this central clip. The arrangement is presented in "rings". One to infinite rings can be placed around the central clip. The rings can be parted into different areas. These areas are called "facets". The distance from the center shows how important or interesting one clip is (in the context of the information that is actually shown in the center). And the position in one of the facets shows in which segment or facet the clip is meant to be.

This is solved in using the a MESH-visualisation and -interaction principle. It turns the search on data into the
experience of a world of information. The MESHs visual approach allows the user to see the connections, see the dependencies. The MESH can be divided into different areas - each presenting one facet of the current information (see Figure1). And every MESH Element (a "clip") can be turned around and on its backside the user will find further contextual information. Furthermore, the center clip is not limited to being just a picture, video or other 2D media plane. It can be highly interactive, allowing different visualizations and changing of parameters.

**Navigation**

The user can click on each clip to select it as the center clip (Alternatively he can use drag and drop). In this moment, every contextual clip will be reorganized and/or updated: the contextual clips will always refer to what's in the middle. All the navigation and updating of the data happens in a way, so the user always understands what's going on. The user always feels under control. This is done by using visual effects, animations and transitions.

**Logic Layer Model**

The UMA Browser Software is subdivided into four autonomous layers. This logical and technological separation is fundamental for the adaptability to very different scenarios and a sustainable development process.

**BUSINESS MODELS**

**Content & User Related Offers**

Each content item in the Mesh is related to a spectrum of commercial offers, which are organized and presented in the same logic like the media contents. They reside on their own logic layer, which can easily be accessed. The commercial offers are relevant to the currently focused media item in the center. Various user-relevant offers (products and services like movies, music, books, clothes, travel, etc.) and also user-related video ads are on display. From here, users can start browsing commercial offers and e.g. go to affiliate sites and make transactions. They can switch back to the media contents layer any time. With this unobtrusive mode, people easily get into a seamless flow of contents and commercial offers.

**advertisement Model »flow«**

A continuous flow of relevant multimedia presentations of Videos, Music, News, PDF’s, Text shown by the UMA Browser, which offers a semi automatic/self controllable steering wheel in the Web-World and Advertisement for 1:1 marketing.
Semantical search relates to relevant search results, and presents more relevant information through the Browser:
In the middle of the presentation layer the first result comes automatically (based upon previous searches) with relevancy and will present the user one continuous and seamless flow of relevant information as a Video Channel without any interrupts. Only when the user clicks on specific frame, the relevancy will be build around the changed direction.
Every cross-section for relevant information selected by the user presents new meaningful and relevant Ads (3-5 sec) clicked on a Link (10 sec Video and on-line shop).
On UMA, entertaining ads and contents come together in a controlled way. Brands control their context and audience, and while the users control, what they want to watch.

**affinity based placement**
Brands try to infiltrate every communicative niche, where their message is embedded in a context that nourishes their image. Affinity based placement of brand communication is the future. UMA can bring brand messages where they fit in perfectly in a way that does not annoy the users, because it fits in also from their point of point of view.

**ad auctions**
The UMA ad model is based on ad auctions: ad buyers bid on keywords. The highest bidder gets the most prominent exposure in the context of relevant contents (according to the selected keywords)
The early bird keyword speculations will generate a prediction market for future trends, which can be statistically analysed and interpreted. UMA offers access to this information for market research and social sciences.

**ad analytics**
»know your context«
UMA analytics tracks all contexts in which ads have been placed and viewed. Ad buyers can easily evaluate and fine-tune their placements by using simple statistic tools.
»know your audience«
The continuous accumulated browsing generates patterns of usage, which can be assigned to “user types” and “characters” (primarily based on preferences / taste, location and time). Specific information on “user types” (groups) and “characters” (archetypes) is valuable for brands and ad buyers, but also for market research and social sciences.

analytics api
UMA will offer a powerful specialized analytics API for those with a particular interest in markets of attention, consumer culture and public opinion (commercial or non-commercial).

**SOCIAL WEB FEATURES**
UMA has high potential for viral and social network communication. At its core stand formats that foster the spreading of UMA all around the world wide web, because they bring value to users.

**Playlists**
Users can edit and send their individual playlists or post them on blogs and social network sites. With playlists, users suggest their individual program to others and along with it their personal point of view. For the playlist authors and senders it is a way to show their expertise, taste and “style”. The perceivers of playlists profit from the individual filtering and compilation, which saves time and effort. Playlist-based programs are entertaining, inspiring and/or enlightening – and are easy: just play! Playlists can be very intimate and sent privately, or they can be part of a personal publishing scenario (e.g. a blogger supports the arguments of his post by embedding a playlist he has prepared for this purpose; a teeney embeds a playlist on her myspace page exposing her »personality« and affinity to a certain fraction of youth culture).
A playlist is always a departing point for further individual pathways, as if it bringings the complete semantic context of each media item (e.g. video) with it.
On UMA playlists will be organized, voted and ranked. An attention economy of playlists and their authors will emerge. This is one of the starting points for developments into community and social networking (based on implicit personal preferences and later also on explicit opinions).

**Playmesh**
The so-called playMesh is another feature with the same viral and social potential as the playlist. A Mesh is a specific arrangement of contents in one UMA grid. It is helpful for the authors to organize their interest cosmos and it incorporates a characteristic pattern (literally!) of the authors persona, visible for the perceivers, respectiveiy the social network.

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**Corresponding author:** Tim Bruysten, richtwert GmbH, Weissenburgstr. 52, 40476 Düsseldorf, Germany, +49 211 514 36 40 0, bruysten@richtwert.eu
UMA offers an embeddable UMA player for web and social networks (facebook app etc). It includes a small version of the Mesh and other UMA specific features, which make it unique (regarding the value it offers and as a visual representation of UMA as a brand).

**Group Intelligence**

Social Networks form powerful group intelligences, which creates powerful individualized markets. The rules for table captions are the same as for the figures. There is only one difference: Captions with table numbers must be placed before the associated chart (see below).

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**Four Forms Behind the Organization and Evolution of All Societies — TIMN**

![Diagram showing the evolution of social forms from 7000 BC to 3000 AD, including kinship-based clans/tribes, hierarchical institutions, competitive manors, and multi-organic networks.](image)
Use Case No.1:
Charlie&Friends HighDef Music Store
The Online Community Shop of Charlie&Friends.

Use case No.2:
Corporate UMA Browser
The UMA Browser allows enterprises to check their corporate identity on the web. It is a platform independent concept. The Corporate UMA Browser allows enterprises to see in realtime what's going on. Not only in the web and its platforms like facebook, twitter and youtube. The Corporate UMA Browser integrates Google's book-search, various newspapers, any useful RSS feed, etc. And of course, the companies internal information can be integrated, too. The backend of the Corporate UMA Browser features several Social Web Analytic Programs.

And all these data are presented in a way, that allows the user to have a very quick and convenient overview. the user can see, how things are interwringled. and the user can go into the detail as far as he likes.

CONCLUSION
A unique user experience. The UMA Browser can be regarded as a semantic metaweb software, a web where potentially all contents of the world wide web are organized and presented visually according to their meaning as much as to the individual interests of the user, who creates his personal path as he surfs his way through the web (»flow browsing experience«).

Commercial offers (products, services, ads).
The UMA Browser integrates these within the metaweb (and the »flow«) in a way that is relevant and meaningful to both, the receiver (user) and the sender of commercial offers.