Information Systems Frontiers - Call for Papers

Special issue on

Business Intelligence and the Web

Rationale and aim

Over the last decade we have been witnessing an increasing use of **Business Intelligence** (BI) solutions, which allow business people to query, understand, and analyze their business data to make better decisions. Traditionally, BI applications allow business people to acquire useful knowledge from the **data of their organization** by means of a variety of technologies, such as data warehousing, data mining, business performance management, OLAP, periodical business reports, and the like.

Yet, in the very recent years, a new trend emerged: BI applications no longer limit their analysis to the data inside a company. Increasingly, they also source their **data from the outside**, specifically, from the Web, and complement company-internal data with value-adding information from the Web (e.g., retail prices of products sold by competitors), with the purpose of providing richer insights into the dynamics of today's business.

In parallel to the move of data from the Web into BI applications, we are also witnessing a move of BI applications from company-internal information systems to the Web: **BI as a service** (e.g., hosted BI platforms for small- and medium-size companies) is the target of huge investments and the focus of large research efforts by industry. The idea is that of outsourcing the processing and analysis of large bodies of data and consuming BI from the cloud: the so-called Cloud Intelligence.

We associate the above dynamics in the BI landscape with the following **research challenges**:

1. **Data from the Web is feeding BI applications**
   In the last decade, the amount and complexity of data available on the Web has been growing rapidly. As a consequence, designers of BI applications making use of data from the Web have to deal with several issues. Among the most interesting challenges we find, for instance, the extraction and integration of heterogeneous data sources. But there are many other interesting research challenges that arise when the Web is seen as a data repository: how to develop Web warehousing solutions, how to handle data quality issues, how to leverage semantic Web technologies, how to employ Web mining, how to do BI with

unstructured data (e.g., text) or semi-structured data (e.g., XML), and so on. Also, a recently emerged research challenge is Web Intelligence, which explores the use of Artificial Intelligence in combination with Web technologies, including novel statistical methodologies. Other interesting topics arise when Web usage data (e.g., logs, data streams, click streams, etc.) are analyzed and used in BI applications, since these data can give support to the development of Web applications, for example to achieve advanced levels of adaptivity in websites.

2. **BI applications are moving to the Web**
   The move of BI applications from company-internal information systems to applications that are accessible over the Web implies the need for web-specific design competencies. In this context, we strongly believe that (existing and future) Web engineering methodologies and technologies represent a large body of knowledge and expertise that could be very useful in the design of applications that allow decision makers to access BI data and functionalities over the Web. Good Web engineering is also the foundation of the design of real-time BI and business performance management applications, as through the Web applications access to data is provided from anywhere, at anytime, and via any media. Furthermore, BI on the Web also implies a plethora of new research challenges that are specific to the BI context, e.g., using Web mashups and RIA for BI development, usability and accessibility for BI applications, security issues in BI, and so on. Finally, another research challenge is related to extracting knowledge from diverse Web sources in order to support, validate or analyze business models.

Topics of interest

The scope of this special issue includes but is not limited to:

- Web warehousing
- Extraction, transformation, and load of Web data
- Web integration
- Web data quality
- Semantic Web technologies
- Web Mining
- Web Intelligence
- Novel statistical methodologies for BI
- The role of Web 2.0/3.0 in BI
- Social networks and BI
- BI with unstructured data (e.g., text) and semi-structured data (e.g., XML)
- BI for designing adaptive websites
- Web engineering techniques for BI applications (Web mashups, RIA, etc.)
- Real time BI
- Business performance management
- Usability and accessibility for BI applications

- Security issues in BI
- BI as a service
- Cloud Intelligence: cloud computing & BI.
- Revenue and risk management in Web-enabled BI applications.

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Forms of submission

There are two types of submission:

1. An **open call** targeted at researchers and practitioners alike working on areas related to the topics of interest listed above. The call for papers will be distributed via the major world-wide mailing lists, such as DBWorld, AISWorld, SEWorld, as well as via local mailing lists and personal contacts.
2. **Personal invitations** targeted at the authors of the best papers accepted at the 2nd Business intelligencE and the WEB (BEWEB 2011) workshop. In particular, authors will be invited to submit extended versions of their papers for full re-review. The extended version should be non-trivially extended from the version that appears in the workshop (at a very minimum it should contain 30% new material). Authors will be asked to write an accompanying letter explaining how their workshop paper has been extended to meet this requirement and how referees' comments and the discussion during the workshop about their work have been addressed.

Submission instructions

Manuscripts must be submitted in PDF format by email. In your email, please copy all four coeditors:

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Paper submissions must conform to the format guidelines of Information Systems Frontiers available at http://www.springer.com/business/business+information+systems/journal/10796

Important dates

Deadline for submission of papers: June 30th, 2011
Authors to receive a 1st decision by: September 30th, 2011
Final notification of acceptance: November 30th, 2011
Publication: subject to ISF schedule