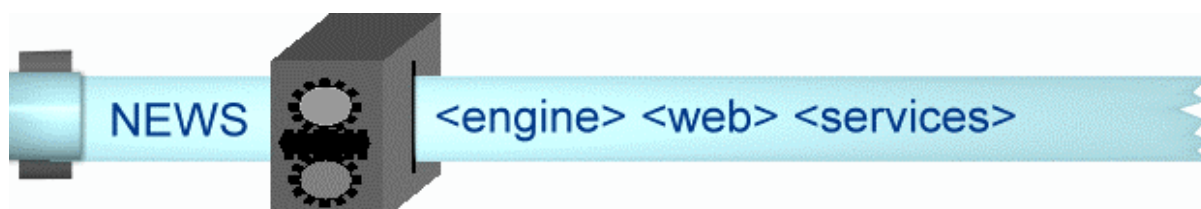


Executive Summary



<http://www.news-project.com>

The goal of the NEWS project is to develop News Intelligence Technology for the Semantic Web. Its main purpose is to extend the reach and delivery capabilities of online content provision and syndication services by supporting advanced personalized news discovery, analysis and presentation, and fostering interoperability across the news content provision and fruition lifecycle.

To this end, NEWS develops a set of interoperable web services that can be integrated into news agencies' workflows. The NEWS solutions will allow news professionals to access, select and personalize delivery of multimedia and multilingual news content. The services comprise the collection and ontological annotation of news material, the processing and presentation of content via headline generation and trend analysis, reasoning-based query components, and a user interface for comprehensive information access that can be configured to meet individual user needs.

NEWS project partners

NEWS is a joint effort of :

- two news agencies: **Agencia ANSA S. C. A R. L., Italy**, and **Agencia EFE S.A., Spain**
- a specialist for automated text analysis and classification: **Ontology Ltd., Israel**
- two research partners with strong ontology & semantic web background: **UNIVERSIDAD CARLOS III DE MADRID, Spain** (with wide expertise in the news domain), and **German Research Center for Artificial Intelligence – DFKI GmbH, Germany** (acting as project coordinator)

NEWS approach

NEWS attempts to reach a distinguishing advantage over other approaches to automated text processing, categorization, and content annotation systems by emphasizing the following core aspects:

- The hybrid text analysis software provided and extended by Ontology Ltd. promises to reach high precision and reliability in multiple languages. It

supports the categorization of complete news items as well as the entity identification and corresponding fine-grained text annotation.

- Furthermore, the text analysis software offers a basis for additional services which are considered of high value to the end user. In particular, NEWS aims at realizing automated support for trend analysis in sequences of news items, based on user's interests, and offers the possibility of automated summarization and headline generation services.
- The integration of generic ontologies and user-definable concepts of interest into a comprehensive deductive database shall allow far-reaching query and browsing services for news item access
- NEWS integrates and operates on current and upcoming standards which gain increasing and wide acceptance within the news industry. In particular, the categorization services correspond to the SRS categorization scheme (maintained and propagated by the IPTC and increasingly accepted by news industry all over the world). The news item input format is NITF and/or NewsML.
- NEWS realizes a flexible architecture by implementing all core functionalities as independent web services with clear interfaces and well-defined functionalities. Any actual system can thus be configured by selecting and combining the services which are most appropriate for the user in question.
- The integration of two important news agencies within the project consortium ensures the close coupling of the development activities with actual user's interests.

During the first year, the NEWS project achieved

- a common understanding of the news domain requirements within the project consortium
- the realization of the envisioned web service architecture
- the initialization of text classification & analysis engines in 6 languages
- implemented web services for text processing, deductive database, and user queries
- a set of general ontologies as a basis for news item annotation and formal user queries
- an integrated system which accepts input from the news agencies, automatically processes the news items received, stores the resulting annotations within a deductive database, and allows the user to retrieve news items via a combination of metadata-based, concept-oriented, and full-text queries.

The interim version of the NEWS system (which integrates the system components into a comprehensive application) has been demonstrated at the project review.

Project results were published and presented at the ISWC conference 2004 in Hiroshima, Japan. Industry- and user-oriented demonstrations and presentations

were given at the CeBIT 2005 exhibition in Hannover, Germany; and at the IPTC meeting in march 2005.

Although the project experienced delays in several work tracks, the overall milestones were reached in time.

Exploitation opportunities

NEWS results are of interest to news item producers, news item disseminators, and news item consumers.

News item producers (like journalists and news agencies) can employ NEWS results for better classification of news items, for improved content annotation, and for the development of new and customized distribution and syndication services based on those fundamental technologies.

News item consumers can employ NEWS results for better personalization, for improved retrieval capabilities, and for summarization and trend discovery.

The cooperation between producers and disseminators, based on NEWS technology, offers new opportunities for customer-specific personalized delivery of relevant information.

Close contacts with representatives from the news industry, telecommunication providers, software companies, and users in the financial, banking, and insurance sector have been realized and will be pursued during the remaining duration of the project.

Online resources

Project results and publications are available on the project website at <http://www.news-project.com>

Several work activities resulted in demonstrators which were put online and thus made available to the general public. These demonstrators currently comprise

- Information about the IPTC SRS categories with browsing support, available at <http://www.nitf.info>
- Demo of live news stream categorization in English language, available at <http://www.ontology-ltd.com/demo>
- Demo of live news stream categorization in Italian language, available at <http://www.ontology-ltd.com/demo/it>
- Demo of live news stream categorization in Spanish language, available at <http://www.ontology-ltd.com/demo/es>

Furthermore, life access to the deductive database and flash recordings of interface behaviour are online and accessible for the reviewers. This material is not yet available to the general public.

Publications

Norberto Fernández-García, Luis Sánchez-Fernández, „Building an Ontology for NEWS Applications“. Poster Presentation at the International Semantic Web Conference ISWC-2004, Hiroshima, Japan.

A. Sanfilippo, A. Bernardi, L. van Elst, L. Sánchez Fernández, M. Sintek, *"Integrating Ontologies for Semantic Web Applications"*. ENABLER/elsnet Workshop International Roadmap for Language Resources Paris, 28-29. August 2003

Further information

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