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Deliverable D4.6
EMANICS dissemination, promotion and collaboration initiatives

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1 Executive summary

From April 2009 to December 2009 the main maintenance activities of the EMANICS site have consisted in day-to-day administration tasks, collection of statistics and update of the content of the site.

News and events have been used as means of information to the community. In the course of 2009, around 11 different news or events were published through the dissemination/announcement channels of the EMANICS site. On the other hand, the PhD's wiki was used by the students or their tutors to keep update the status of the doctorate studies within the EMANICS community. Also worthy to mention is the effort to keep updated the list of papers published although this won't be reflected up to the end of the project.

The process of freezing the EMANICS website has also been started. Thanks to the implemented Content Management System (CMS), access to the site is based on hierarchical users' accounts and permissions, where higher levels of users can edit or publish content. During the process all the users accounts needs to be disabled. The whole site can be also backed up for future reference and protected in the main CMS or web server properties to be in a read-only state. The specific content to be kept or removed is also being identified.

The SimpleWeb has been replaced by two new web sites. One is a renewed layout of the former and the other is a wiki to permit registered users the upload of content. The new layout of the web simplifies the navigation process and is more aligned with nowadays web design. The wiki has been started from the information available in the EMANICS site and it is expected to grow in the future with information provided by the whole community in networks and service management.

The main talks of the IM2009 conference were converted into podcast that are now already available. In addition, a podcast on a tutorial on the use of NETCONFIG and YANG has been prepared as well. In summary, the library of podcasts produced by EMANICS was increased by 11 units.

2 Introduction

Deliverable D4.6 is the report of activities conducted within WP4 in the nine month period starting April 2009 and ending December 2009. In that period the site has continued sowing a stable behavior and only a few incidents appeared that were solved on time. Although almost at the end of the project, the website continues to be carefully maintained.

Content creation has been indeed the priority of our effort in WP4. In that respect we have to mention the creation of a series of podcasts covering the main talks of the IM2009 Conference, a podcast on a tutorial on the use of NETCONF and YANG, the publication of news and events of general interest for the community and the update of various Wikipedia pages. Nevertheless, the most outstanding result on that respect has been the release of a new page for the SimpleWeb.

Maintenance activities have continued without major incidents. In particular, usage site statistics were collected although it was decided not to be included in the present deliverable and present them at the end of the project in a monograph devoted to that subject.

After this introduction, Chapter 3 presents a summary of the activities conducted within the EMANIC Secretariat, intended to keep the site updated. Finally, we summarize the actions to adopt at the end of the project in respect to the EMANICS site.

Chapter 4 starts presenting the changes made on the SimpleWeb. The next subchapter is devoted to the library of podcasts that were produced based on the IM2009 Conference. A specific subchapter follows devoted to present the podcast on the NETCONG and YANG tools. Finally, Chapter 4 concludes presenting the news and events published during 2009.

The deliverable ends with a conclusions section, and the references and acronyms lists.

3 Maintenance and consolidation of dissemination and collaboration tools

3.1 EMANICS Secretariat reporting

The Events and the News sections have been merged in order to have a clearer and easier way to browse their contents. This means that the content of both sections is the same and we try also to keep the same format. This aspect is only partially fulfilled to avoid destroying the history of past news and events. Each of these sections starts with a set of the most recent news/events. Then a table called Classified News or Classified Events follows including all the remaining news/events. This table groups the news/events in categories to facilitate its browsing. The table is edited manually by moving the news/events of the former above mentioned group to the table. The table is really an indexing instrument because the content of the news/events properly said is coming after the table, in the order they have been published.

The content of the PhD database has been also tracked to ensure its updating. A global call for updating was issued early at the beginning of 2009. This motivated the updating of people who deemed appropriate to modify the content of their corresponding records. Table 1 is a log of all updates registered in that section through 2009. Making use of a similar procedure (global call initiated), we also updated the EMANICS directory (see the last row of Table 1). In fact, the EMANICS directory is based on the same wiki as the PhDs database.

Table 1. Modifications in the PhD wiki done in 2009. The second column is the page modified and the third one corresponds to the author

2009/11/02 04:09	ha_manh_tran	hhtran
2009/10/05 13:41	anna_sperotto	sperottoa
2009/09/01 15:38	iyad_tumar	itumar
2009/09/01 14:26	thomas_bocek	draft
2009/07/24 11:08	idilio_drago	created idrago
2009/07/24 11:07	start	idrago
2009/06/17 14:15	tiago_fioreze	tfioreze
2009/04/02 09:45	bagnasco	Serrat
2009/03/17 17:10	martin_serrano	Serrat
2009/03/07 11:16	yampolskiy_mark	created schaaf
2009/03/05 15:09	thomas_schaaf	schaaf
2009/02/27 11:41	michael_kretzschmar	hochstatter
2009/02/25 14:11	iris_hochstatter	hochstatter
2009/02/25 14:08	frank_eyermann	hochstatter
2009/02/18 17:15	matthias_goehner	hochstatter

2009/02/18 17:04	robert_koch	hochstatter
2009/02/18 16:52	bjoern_stelte	hochstatter
2009/01/30 17:30	ralf_koenig	RalfKoenig
2009/01/30 17:30	ralf_koenig	RalfKoenig
2009/01/30 17:28	johannes_watzl	created RalfKoenig
2009/01/24 09:19	EMANICS_directory	JosepM

Another activity that is worthy to mention here is the update of papers published in 2008. This update took place early 2009 and it will be repeated this year with the papers published by the EMANICS members through 2009. In summary, we uploaded 34 papers out of which 5% were links to the paper content, 88% were the full paper content and the remaining 7% were paper abstracts only. The decision about what to upload is done based on the paper document availability, copyright issues and the wish of the paper authors.

The EMANICS Secretariat also took care of the upload of all the deliverables in the public site when they appeared as well as of the update of activities in each workpackage and other smaller maintenance tasks.

3.2 Preparation of the EMANICS site for the end of project

The EMANICS website presents wide amount of information which were collected, prepared and then published throughout the whole time of the project. Looking at the website structure, it embraces the sections presented in Table 2.

Table 2. Public area of the EMANICS web site

Menu item name	Description of the content	Type of content (static, dynamic), additional remarks
Welcome	Short description of the project and headline news	Static, dynamic
About	General description of the project	static
News	List of news	dynamic
Newsletter	List of newsletters with links to pdf files	dynamic
Activities	Detailed description of project structure	dynamic
PhD Theses	Summary of completed and ongoing PhD Thesis within EMANICS	dynamic
Documents	Important files and documents for downloading	dynamic
Events	Lists of project events with links to corresponding pages	dynamic
Software	Repository of network management	dynamic

	software	
QoS Management	**QoS Management Information Portal**	Link to external website
Call for Papers	**SimpleWeb: Call for Papers**	List of RSS feed from external portal
Links	**List of valuable website devoted to network management**	dynamic
Partners	**List of participants**	static
Scientific and Industrial Council	**Members list of Scientific and Industrial Council of EMANICS**	static
Contact	**Contact to main persons of the project (Scientific Leader, Coordinator, Activity Leaders)**	static
Site Map	**Site map of the website**	dynamic
Member area	**Login page for private area Web site**	static

The main page contains also additional menu panel with links to RSS feeds:

- News RSS
- Events RSS
- CFP RSS (Call For Papers RSS)
- Conference RSS
- Podcasts

The structure of the project is quite complex and include different amount of information. The published information may be divided into two sets: information of the project itself and second one, articles and publications developed within the project. Most of both content types can be considered as valuable and interesting even after the end of the project.

The process of identification of valuable content is necessary to decide which part can be still presented on the website as the frozen articles. The other remaining part recognized as negligible should be removed from the website after the end of the project.

The table below presents which part of the website structure can be identified to be presented or not after the project:

Table 3.Proposal for the frozen EMANICS site

Menu item name	Description of the content	Status after end of the project (present, absent)
Welcome	**Short description of the project and headline news**	present
About	**General description of the project**	present
News	**List of news**	present with consideration

Newsletter	List of newsletters with links to pdf files	present
Activities	Detailed description of project structure	present
PhD Theses	Summary of completed and ongoing PhD Thesis within EMANICS	present
Documents	Important files and documents for downloading	present with consideration
Events	Lists of project events with links to corresponding pages	present with consideration
Software	Repository of network management software	present with consideration
QoS Management	QoS Management Information Portal	present
Call for Papers	SimpleWeb: Call for Papers	absent
Links	List of valuable website devoted to network management	present
Partners	List of participants	present
Scientific and Industrial Council	Members list of Scientific and Industrial Council of EMANICS	present
Contact	Contact to main persons of the project (Scientific Leader, Coordinator, Activity Leaders)	present
Site Map	Site map of the website	present
Member area	Login page for private area Web site	absent

Some sections presented above need more consideration in determining its status after ending of the project. It concerns especially more complex and extended parts like Documents or Events which belong to different authors who may need to determine if their publications are up to date and may be left on the website.

The process of freezing the EMANICS website from technical point of view should be smooth and easy to proceed. Thanks to implemented CMS, access to the site is based on hierarchical users' accounts and permissions, where higher levels of users can edit or publish content. During the process all the users accounts needs to be disabled. The whole site can be also backed up for future reference and protected in the main CMS or web server properties to be in a read-only state.

After turning the website in read-only state, it can be still running and publicly accessible for several months or even longer, as long as there are sufficient hardware and network resources available. In a moment of writing of this document, the load caused by the website on the hardware and network is quite acceptable.

4 Extended dissemination & promotion

4.1 Update of the SimpleWeb

As initially planned the SimpleWeb has been replaced by two new web sites, namely:

- The new SimpleWeb website
- The SimpleWeb wiki

The new SimpleWeb website was designed and developed to replace the old version of the original one.
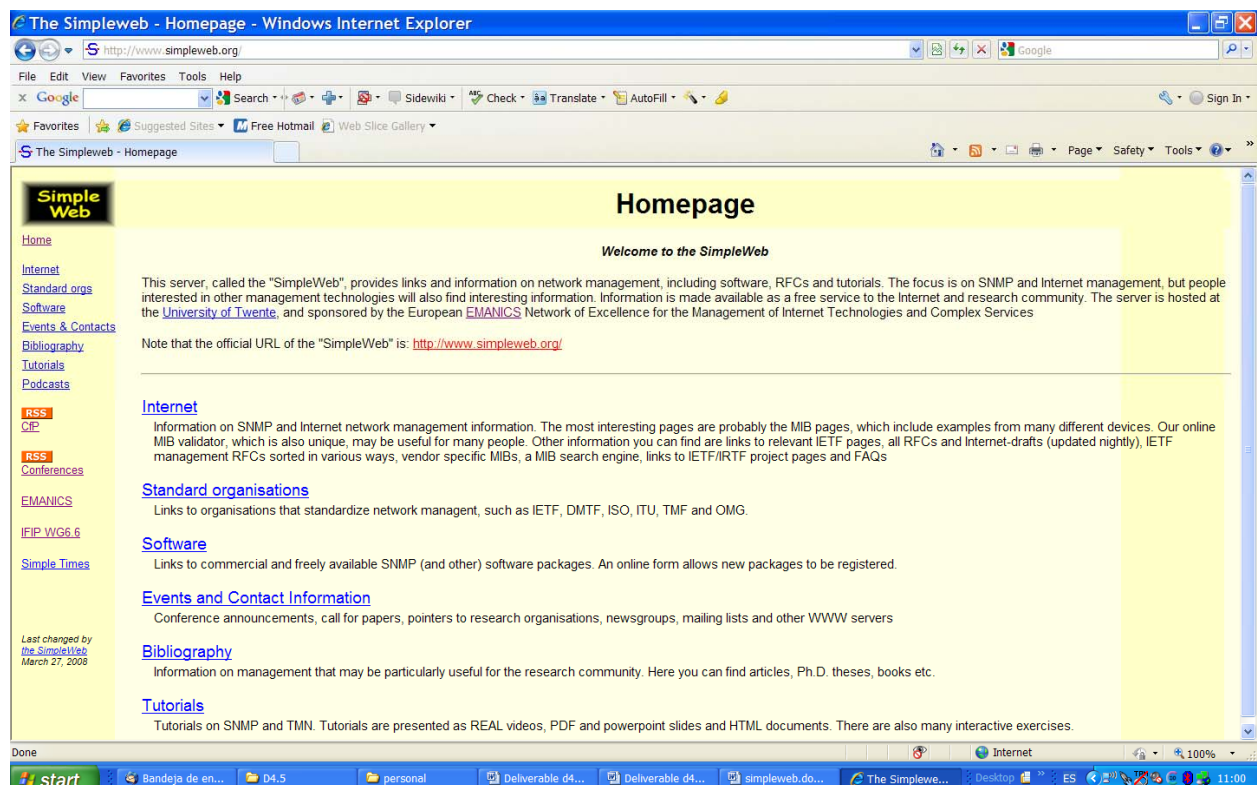

Figure 1. Main page of the old SimpleWeb site

The new website contains a new and simpler user-friendly layout. In addition, the contents of the website were rearranged in such a way that is more easily now to navigate through the web pages. Finally, the old software running on the old SimpleWeb (such as the software responsible for automatically update the Call For Papers) was adapted to run on the new website. The new version of the new SimpleWeb is currently available at http://www2.simpleweb.org/ . However, this website will replace the old one in the first weeks of 2010.

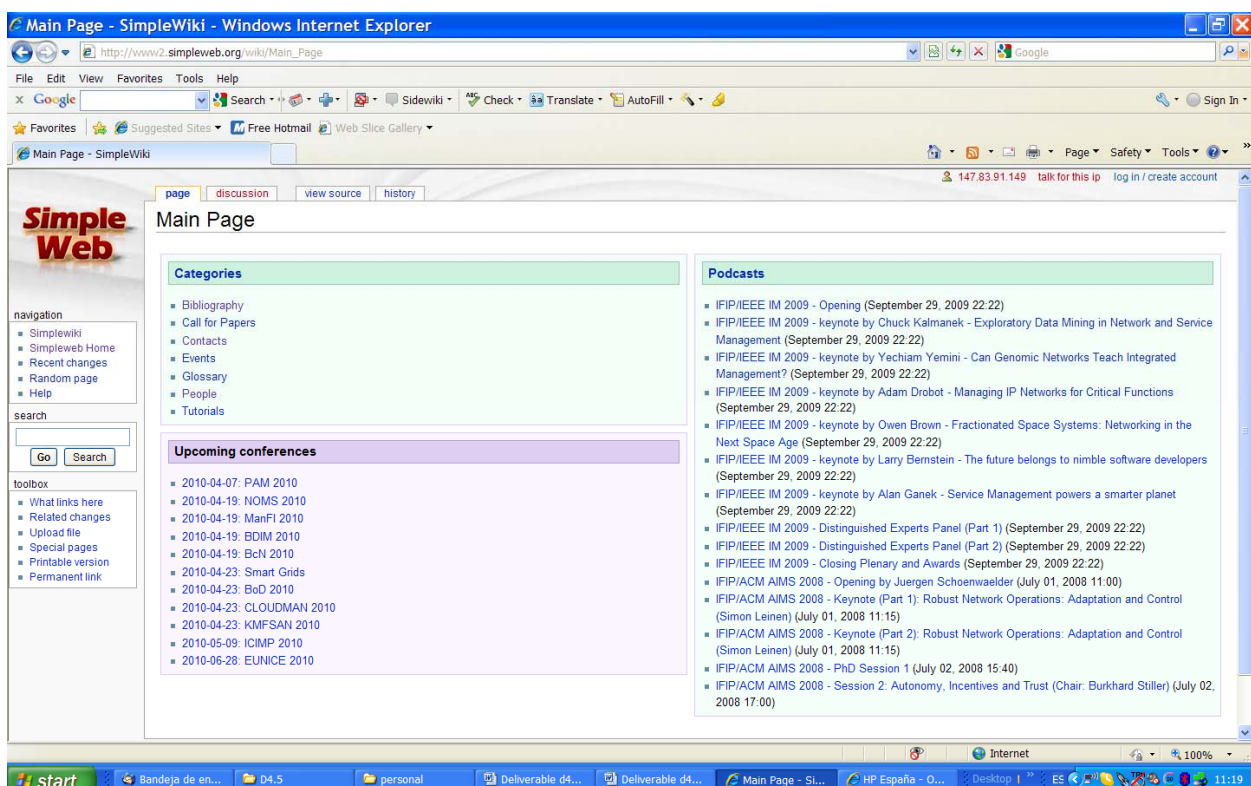*Figure 2. Main page of the new SimpleWeb site*

Figure 3. Main page of the wiki integrated in the SimpleWeb

The SimpleWeb wiki, in turn, should be seen as a complement for the new SimpleWeb website, where dynamic content is hosted. It hosts Call For Paper list, the Event List, Tutorials, Podcasts and People list. The idea is to have a website that can be easily update by any EMANICS partner without having to have access to the servers themselves. It is currently available at http://www2.simpleweb.org/wiki/main_page . It will be hosted in the first weeks of 2010 at http://www.simpleweb.org/wiki/main_page .

4.2 Creation of podcasts on relevant events

The following podcasts, all available at [1], have been recorded during the 11th IFIP/IEEE International Symposium on Integrated Network Management (IM 2009), which was held 1 - 5 June 2009, Long Island, New York, USA.

- Opening Session
  Opening of the IFIP/IEEE Integrated Management 2009 Symposium. Recorded at the 11th Integrated Management Symposium (IM 2009), which was held June 1-5, 2009 in Long Island, New York, USA at Hofstra University.

- Keynote by Chuck Kalmanek, Vice President, AT&T, Internet and Network Systems Research, AT&T Labs
  Large scale networks and service infrastructures present challenges that are at the forefront of systems research. This talk will give an overview of the problem domain, and the role that exploratory data mining plays in addressing these challenges. I will present work at AT&T Labs on a scalable data management infrastructure, data visualization tools, and advanced management applications.

- Keynote by Yechiam Yemini, Professor & Director, Distributed Computing Lab, Columbia University
  Cells use complex networks to handle metabolic, regulatory and signaling operations. Assuring robust operations of these networks is, literally, a matter of life and death. These networks, furthermore, must be able to adapt to significant changes in their operating environment; e.g., in the absence of glucose a bacteria may need to reconfigure its networks to process lactose. Cellular networks thus face similar challenges of managing failures and configuration changes as communication networks. Unlike communication networks, however, these operations management functions must be integrated into the networks design. This presentation will consider some of the architectural fundamentals of genomic networks from the perspective of integrated network management.

- Keynote by Adam Drobot, CTO and President, Advanced Technology Solutions, Telcordia
  Over time the "Internet" has become the central element for integration of network functions and services. In a very profound sense the "Internet" has dramatically lowered the time and cost for creating new applications, new services, and new ways of social interaction. At the same time what we now call the "Internet" includes an enabling layer of computing, storage, communications, software, and special purpose devices. The "Internet" is increasingly the delivery mechanism for critical services. Some of these are related to: control systems for

utilities and transportation; financial services; healthcare; safety; law enforcement; and emergency response. The consequence is that at least portions of the "Internet" must exhibit reliability, high availability, and scalability to serve large numbers of citizens. The talk will concentrate on the approaches and challenges of managing and operating hardened IP infrastructure suitable for critical services and will examine the requirements from illustrative application examples.

- Keynote by Owen Brown, Program Manager-F6: Fractionated Spacecraft Program, Defense Advanced Research Projects Agency
Fractionated space systems offer a radically new approach to designing, building, testing, launching, operating, maintaining, and evolving spacecraft. Fractionation is the process whereby a satellite is decomposed into a cluster of wirelessly networked smaller spacecraft. This cluster creates a "virtual satellite" that is fundamentally more flexible and robust than its monolithic counterpart. In 2007 the Defense Advanced Research Projects Agency (DARPA) began a program known as System F6 that will attempt to design, build, and launch the very first fractionated space system. Dr. Owen Brown, creator of the concept, and the Program Manager of F6, will explain the technical challenges, approach, and the potential implications of F6 on future space architectures.

- Keynote by Larry Bernstein, Distinguished Service Professor, Stevens Institute of Technology and former AT&T Executive
Software technology continues to emerge. Systems and network management developers have always been early technology adopters. What must you learn to be effective in 2015? This keynote identifies future technologies that will be the foundation for our systems and discusses their impact. Topics will include, but are not limited to, Communications, Componentry, Autonomics, Humanism and Architecture.

- Keynote by Alan Ganek, CTO and VP of Strategy and Technology, Software Group, IBM
The reach of technology today extends nearly everywhere, and more importantly, in this new age, beyond the data center. Not only do more and more people carry the internet in the palm of their hand, but virtually all elements of business processes, production, collaboration and physical infrastructure are becoming instrumented electronically, networked and accessible, enabling new and exciting solutions and services. This is the foundation of a smarter planet, creating new value for business, government and science. A very dynamic infrastructure is required to support this expansion of value, powered by advances in Service Management to provide improved agility in leveraging technology, with vastly reduced costs and greater automation and efficiency. Service Management provides the visibility, control, and automation of this dynamic infrastructure, and a vehicle to monetize management technology. I will discuss market forces, opportunity, technology directions, and research challenges.

- Distinguished expert panel on "Making Management Matters Matter" (split in two parts), with speeches by:
  - Alexander Clemm, Cisco (panel moderator)
  - John Strassner, Waterford Institute of Technology, Ireland

- Alan Ganek, IBM
- Joseph L. Hellerstein, Google
- Larry Bernstein, Stevens Institute of Technology, USA
- George Pavlou, University College London, UK

The theme of IM 2009, "Making Management Scalable, Robust, Cost-effective and Revenue Generating", points to key issues of a technical and business nature that the field has been trying to address for many years, yet continues to struggle with. At the same time, this has not prevented dramatic progress in the technologies they manage. Networks continue to grow, communication services are getting ever more pervasive, and innovation in those services continues to grow. The question then arises, which impact does progress in management technology really have on the technology that it manages and its supporting businesses? Is the impact merely one of incremental improvements in economics, or is it more profound? If management was more scalable, robust, cost-effective, and revenue generating than it is, what would be the impact on the managed technologies and their adoption? Would we see even more rapid progress, would we see different and more powerful services than we do today, or would there be entirely new classes of applications that would suddenly become feasible? In other words, is management a bottleneck? On the other hand, is management in reality doing just fine and its challenges mostly imagined? In which areas does progress in management really matter, and why?

- Closing Plenary and Awards
Closing of the IFIP/IEEE Integrated Management 2009 Symposium. Announcement of the Dan Stokesberry Award to Raouf Boutaba, Best Paper Award, Best Dissertation Award and travel grants. Announcement of NOMS 2010, Manweek 2009 and IM 2011.

4.3 Creation of podcasts on network management tutorials

A podcast on a tutorial on *Network Configuration Management using NETCONF and YANG* has been recently created. The tutorial includes slides giving an introduction to NETCONF and YANG plus a screencast demonstrating the usage of NETCONF and YANG. The screencast uses software, namely the nclient Python API for NETCONF and the YANG parser integrated into the libsmi library, that has been developed as part of the open source activities of the EMANICS project.

The tutorial was initially presented live at the 75th IETF meeting (Stockholm, July 2009) during the OPS-AREA meeting. The slides can be found in the IETF proceedings [2]. The audio recording of the presentation is available from the IETF's audio archive [3]. Since our efforts to capture a suitable video stream of the presentation failed, we first decided to take the audio stream and to create video based on the slide material, adding new screencast recordings of the demonstrations. The idea was that this approach keeps the live character of the presentation. It turned out, though, that retro-fitting video to the audio recording is difficult and so it was finally decided to redo both audio and video.

The technical production has been done under Mac OS X using Apple's iMovie video editing program and shinywhitebox's iShowU screen cast capturing program. Since the tutorial slides were created using LaTeX and available only in PDF format, a little script

was written to export the slides in a picture format that can be loaded directly into iMovie. The voiceover function of iMovie was used to record voice for the slides. The screencast clips produced using iShowU were also imported into iMovie and iMovie was finally used to arrange the clips and to generate the final results.

While podcasting is a nice way to stream contents to users who have subscribed to a podcast channel, it seems that online video services such as YouTube are getting increasingly used to disseminate online tutorials, even though YouTube imposes several restrictions, such as the time limit of 10 minutes, which causes videos to be split into multiple parts.

The result is planned to become online on YouTube and likely also on the SimpleWeb podcast stream very soon.

4.4 News and events disseminated through the EMANICS site

In the course of 2009, around 11 different news or events were published through the dissemination/announcement channels of the EMANICS site. These channels were in principle three, namely the *Highlighted News*, the *News* and the *Events*. As news and events were really difficult to distinguish in most cases we decided to merge both, although this merging has to be done manually. Table 4 shows the log of all news and events with their corresponding publication date. And the channel through which they appeared.

Table 4. Log of news and events published in the EMANICS site through 2009

Date	Item Title	Section / Category
11/24/09	3rd IFIP/IEEE International Workshop on Bandwidth on Demand and Federation Economics	Events / Events-all
11/24/09	3rd IFIP/IEEE International Workshop on Bandwidth on Demand and Federation Economics	Highlighted News / Front Page News
11/23/09	2nd IFIP/IEEE International Workshop on Management of the Future Internet	Highlighted News / Front Page News
11/19/09	1st IFIP/IEEE International Workshop on Management of Smart Grids	Events / Events-all
11/19/09	1st IFIP/IEEE International Workshop on Management of Smart Grids	News / All News
11/19/09	1st IFIP/IEEE International Workshop on Management of Smart Grids	Highlighted News / Front Page News
09/15/09	2nd EMANICS Workshop on Netflow/IPFIX usage in network management	Events / Events-all
09/15/09	EMANICS Workshop on Network Security	Events / Events-all
09/15/09	2nd EMANICS Workshop on Netflow/IPFIX Usage in	News / All News

	Network Management	
09/15/09	2nd EMANICS Workshop on Netflow/IPFIX Usage in Network Management	Highlighted News / Front Page News
09/15/09	1st EMANICS Workshop on Network Security	News / All News
09/15/09	EMANICS Workshop on Network Security	Highlighted News / Front Page News
09/13/09	4th GI/ITG KuVS Workshop on The Future Internet and 2nd Workshop on Economic Traffic Management, ETM	Events / Events-all
06/24/09	Position Paper from Future Content Networks Session	News / All News
05/29/09	4th GI/ITG KuVS Workshop on The Future Internet and 2nd Workshop on Economic Traffic Management, ETM	News / All News
05/29/09	4th GI/ITG KuVS Workshop on The Future Internet and 2nd Workshop on Economic Traffic Management ,ETM	Highlighted News / Front Page News
03/18/09	Joint EMANICS, AutoI, Self-Net Workshop on Autonomic Management	News / All News
03/18/09	Joint EMANICS, AutoI, Self-Net Workshop on Autonomic Management	Highlighted News / Front Page News
03/16/09	2nd EMANICS Workshop on P2P Management	News / All News
03/16/09	2nd EMANICS Workshop on Peer-to-Peer Management	Highlighted News / Front Page News
02/28/09	Visualization and Monitoring of Network Traffic Dagstuhl Seminar	News / All News
02/28/09	Autonomous Infrastructure, Management and Security (AIMS 2009)	News / All News
02/28/09	Autonomous Infrastructure, Management and Security (AIMS 2009)	Highlighted News / Front Page News
02/26/09	3rd International Summer School on Network and Service Management (ISSNSM 2009)	News / All News
02/25/09	3rd International Summer School on Network and Service Management (ISSNSM 2009)	Highlighted News / Front Page News
01/20/09	1st IFIP/IEEE International Workshop on Management of the Future Internet (ManFI 2009)	Highlighted News / Front Page News
01/20/09	1st IFIP/IEEE International Workshop on Management of the Future Internet (ManFI 2009)	News / All News

5 Concluding remarks

Our policy is summarized with three keywords, namely, consolidate, enhance and extend. Consolidate means to look at tools and content that has been proven to be effective and therefore that deserve to be kept alive and to take the appropriate actions to allow them to be fully operational. Enhance means to do appropriate modifications, even the full replacement if necessary, of tools and content that manifest a clear way to be improved. Finally, extension means to look forward both in terms of dissemination means and content properly said.

The main effort in the period April 2009 to December 2009 has continued in creating as much dissemination and collaboration content as possible. In addition, maintenance and evolution tracking of the electronic dissemination infrastructure are also worthy to mention. Therefore we can conclude that WP4 has progressed well in view of its objectives.

The EMAINCS electronic dissemination and collaboration environment is fulfilling its main objective to serve our community to work together as well as to inform the external world about our activity. The operation is smooth and the impact is kept under the initial expectations. Being at the end of the project, our future goal is to freeze the web site and use all that was achieved and learnt through these four years in the enhancement of the SimpleWeb.

6 References

[1] http://www.SimpleWeb.org/podcasts/SimpleWeb.rss

[2] J. Schonwalder: NETCONF and YANG status, tutorial, demo. Proceedings of the 75th IETF Meeting, July 2009, <http://www.ietf.org/proceedings/75/slides/opsarea-5.pdf>

[3] ftp://videolab.uoregon.edu/pub/videolab/media/ietf75/ietf75-thur-largestage-pm.mp3.1

7 Abbreviations

AIMS	Autonomous Infrastructure Management and Security (annual conference)
CGI	Common Gateway Interface (web scripting facility)
CMS	Content Management System
IFIP	International Federation for Information Processing
IM	Integrated Management (bi-annual conference)
ManWeek	Management Week (group of annual workshops)
NOMS	Network Operations and Management Symposium (bi-annual conference)
NRMG	Network Management Research Group
RSS	Really Simple Syndication
SVN	SVN is a version control system
Trac	Trac is an open source, web-based project management and bug-tracking tool