

Dissemination Activity Report

Deliverable D6.3

Nature : Deliverable

Due date : 31/01/2010

Delivery Date: 03/02/2010

Start date of project : 01/02/2008

Duration : 36 months

Distribution: Public





Specific Targeted Research Project
Contract no.214898
Seventh Framework Programme: FP7-ICT-2007-1

List of the authors

Project acronym	MANCOOSI
Project full title	Managing the Complexity of the Open Source Infrastructure
Project number	214898
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Workpackage number	WP6
Deliverable number	3
Document type	Deliverable
Version	1
Due date	31/01/2010
Actual submission date	03/02/2010
Distribution	Public
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1 Introduction

This report describes the dissemination activities related to the Mancoosi project over the second period of the project, starting on February 1st, 2009 and ending on January 31, 2010. The report first describes the server infrastructure used to disseminate information related to Mancoosi. It then gives an overview of the coverage of Mancoosi in the press and on the web. Then, it gives a detail of the publications within the scope of the project and finally, the appendix provides a summary of the partners dissemination activities.

2 The Mancoosi Project Server Infrastructure

The Mancoosi project dissemination and collaboration infrastructure has been chosen and built using mostly free software components, and is open to the public for review and collaboration. This infrastructure consists of a web site, a weblog, a wiki and a series of mailing lists.

2.1 Website Organization and Access Logs

The domain name `mancoosi.org` was reserved and bought in 2007. The URL `http://www.mancoosi.org` points to a set of web pages that contain a description of the project, a description of the objectives of each technical workpackage, links to the partners web sites and all the Mancoosi deliverables, papers and technical reports. Given that Mancoosi follows up on the research work already undertaken in the scope of the FP6 EDOS project, the Mancoosi web site points a page dedicated to results from EDOS dependency checking. The home page also has a link to the Mancoosi weblog.

The web pages are fully compliant with the W3C web standards and have been built taking into consideration accessibility issues for the visual impaired, by avoiding script languages, and using Cascading Style Sheets to decorate the information, which is fully available to any e-visitors, even the ones resorting to text-based browsers like `lynx`, which are customary among the visual impaired.

2.2 Mancoosi Visual Identity

During the second period of the project, the overall visual identity of the Mancoosi project has been improved. A new graphic charter has been designed in order to improve the project website, which is the most important element of communication on the project, and applied uniformly to all the communication material of the project (deliverables, leaflet, etc.). The new Mancoosi website was launched in September 2009, and all the previous deliverables have been ported to the new visual identity.

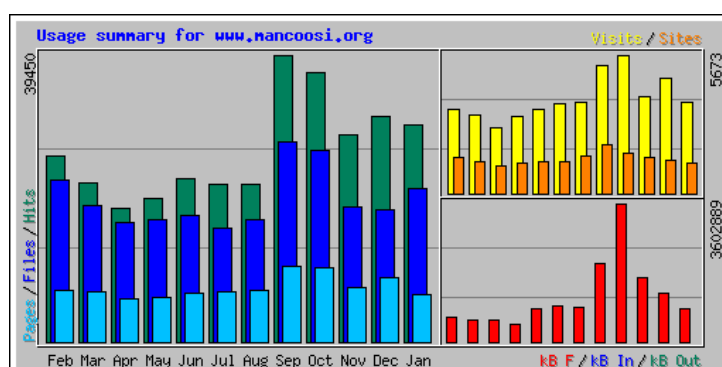
A leaflet presenting Mancoosi to the public has been designed and is available, since January 10, 2010 on the Mancoosi website. The objective is to summarise, in a nutshell, the Mancoosi project to the public, highlighting the virtuous circles among users, developers, distribution editors and researchers. This leaflet is to be distributed in all occasions that are relevant: during conferences, talks, trade shows, meetings, and the like.

The Mancoosi leaflet is available in pdf format on the Mancoosi website homepage ¹, and is also contained in the present document.

A poster, giving an overview of the project has also been designed. It was presented for the first time during the Collaboration Meeting on FP6 and FP7 projects on objective 1.2, organised by the European Commission, DG Information Society in Brussels, Belgium, on June 10-11 2009.

2.3 Visits to the Mancoosi Web Site

From the launch of the project, we have been collecting statistics on the hits to the Mancoosi web site. The graph and table below show the visits to the Mancoosi web site, over the second period of the project, since February 2009.



Summary by Month												
Month	Daily Avg				Monthly Totals							
	Hits	Files	Pages	Visits	Sites	kB F	kB In	kB Out	Visits	Pages	Files	Hits
Jan 2010	1421	1000	306	178	1239	861495	0	0	3746	6442	21020	29858
Dec 2009	998	585	287	152	1371	1252456	0	0	4728	8921	18158	30950
Nov 2009	949	618	247	132	1457	1686308	0	0	3967	7420	18554	28473
Oct 2009	1197	846	329	183	1651	3602889	0	0	5673	10226	26256	37112
Sep 2009	1315	918	349	174	1986	2056263	0	0	5228	10472	27543	39450
Aug 2009	696	539	231	120	1557	887328	0	0	3729	7190	16725	21594
Jul 2009	700	503	224	118	1329	947273	0	0	3660	6951	15611	21718
Jun 2009	748	581	226	114	1306	881801	0	0	3443	6801	17431	22452
May 2009	635	543	196	101	1233	448197	0	0	3160	6105	16846	19690
Apr 2009	613	548	199	89	1136	581137	0	0	2676	5980	16440	18396
Mar 2009	705	605	222	104	1312	581194	0	0	3228	6897	18778	21864
Feb 2009	909	795	252	122	1478	655376	0	0	3436	7071	22274	25458
Totals						14441716	0	0	46674	90476	235636	317015

The data above show a regular interest to the web site since the beginning of the second period of the project, i.e. from February 2009 to January 2010. The Mancoosi web site has experienced a significant peak in the number of its visitors since September 2009, which can be attributed to the articles appeared in the press in Portugal and France in that period.

2.4 The Mancoosi Weblog

The Université Paris Diderot team has set up a weblog to allow members of the Consortium to post entries related to the various activities of the project².

¹<http://www.mancoosi.org/>

²<http://blog.mancoosi.org/>

The Mancoosi partners are encouraged to post any entry related to Mancoosi activities (the Mancoosi collaboration meetings, pictures at a conference, related results, etc.) on the weblog to disseminate Mancoosi activities in an informal way. It is a multi author blog based on **Dotclear**. Anybody (who has been given the rights to do so) can post, still preserving his identity as post author.

Up to now, 38 posts have been posted since April 2008 to inform the wide public on Mancoosi meetings, conferences related to the research work of Mancoosi, articles written and published within the scope of the project, etc.

2.5 Collaborative Infrastructure

An open source collaborative platform has been set up by the Edge-IT team to allow discussion among the members of the consortium, using a server deploying the **XWiki** wiki implementation³. The wiki is a private platform by default that allows members to share information, documents and files related to Mancoosi. The wiki contains a significant collection of information useful for collaboration within the consortium, such as calls for papers, articles resulting from the work accomplished within the project, presentations at conferences, deliverables, agendas, slides and minutes of all the consortium meetings and bulletins on administrative issues.

A section of the wiki is dedicated to administrative issues and management of the project and only gives access to the coordination team at Université Paris Diderot.

2.6 Open Source Mailing List Server

In addition to the web site, the weblog and the collaborative platform, the members of Université Paris Diderot have deployed a series of internal mailing lists, based on the French open source **Sympa** mailing list manager. Members of the Consortium as a whole use these mailing lists for scientific, administrative and coordination issues.

Each technical workpackage has its mailing list. Researchers and programmers interested in cooperating with Mancoosi can ask for subscription to one or more of these technical mailing lists.

2.7 Mancoosi on Twitter

Since the 20th of January 2010 it is possible to be informed via Twitter of the commits in the Mancoosi Subversion by following the user <http://www.twitter.com/mancoosi>.

3 Mancoosi in the Press and on the Web

3.1 Mancoosi in the Press

Several articles in the press deal with the project. Below we provide selected examples of articles presenting Mancoosi published in 2009 that appeared on web magazines and on the press, like in *La recherche*, a well-known French scientific magazine. They are presented in chronological order.

³<http://wiki.mancoosi.org/bin/view/Main/>

- *Projet Mancoosi: “Proposer ce qu’il y a de meilleur lors du téléchargement d’un logiciel”*, 03/04/2009, ITespresso.fr⁴;
- *Video - Projet Mancoosi: “Proposer ce qu’il y a de meilleur lors du téléchargement d’un logiciel”*, 03/04/2009, ITespresso.fr⁵;
- *Offrons aux jeunes les clefs du pouvoir et de la liberté*, 09/2009, Sciences et avenir n°751, Nouvel observateur web site⁶;
- *Open World Forum: les PME, prochain terreau fertile de l’Open Source en France*, 05/10/2009, Le MagIt.fr⁷;
- *O regresso do superpinguim!*, 11/2009, Exame Informatica n°173, page 86
- *La science du logiciel libre*, 12/2009, Les cahiers de l’INRIA, La recherche n°436.
- Our argentinian partner, *Pixart*, will deploy the Mancoosi tools on over 250.000 classmates, to be distributed to young students in Argentina over the next months; several announces have been made about this in the local press.

3.2 Mancoosi on the Web

When typing Mancoosi on *Google*, we discovered that an entry on the project has been added to *Wikipedia* with a link to the project web site in March 2008. Though short, this entry shows an interest for the project and its thematic. Some of the consortium members have contributed minor fixes to this page. We might decide to add more factual information in the future.

4 Mancoosi Conferences

A significant effort has been made over the second year of the project to raise interest in Mancoosi and its research theme among the scientific community.

The Mancoosi team has attended a variety of events, ranging from scientific conferences to community meetings, since February 2009. Here follows the complete list.

Scientific events

- WebDB 2009, Rhode Island, USA
- VLDB 2009, Lyon, France
- EDBT 2009, Saint Petersburg, Russia
- ENASE 2009, Milan, Italy

⁴<http://www.itespresso.fr/vnunet-tv-projet-mancoosi-proposer-ce-quil-y-a-de-meilleur-lors-du-telechargement.html>

⁵<http://tv.itespresso.fr/video/569/projet-mancoosi---proposer-ce-qu-il-y-a-de-meilleur-lors-du-telechargement.html>

⁶<http://sciencesetavenirmensuel.nouvelobs.com/hebdo/sea/p751/articles/a407123-.html>

⁷<http://www.lemagit.fr/article/france-pme-inria-opensource-cirill/4434/1/open-world-forum-les-pme-prochain-terreau-fertile-open-source-france/>

- MDWE 2009, San Sebastian, Spain
- ICTM 2009, Zurich, Switzerland
- WETICE 2009, Groningen, The Netherlands
- RDP 2009, Brasilia, Brazil
- CPAIOR 2009, Pittsburgh, USA
- JM2L 2009, Nice, France
- IJCAI 2009, Pasadena, USA
- IWOCE 2009, Amsterdam, Holland
- ESEM 2009, Orlando, USA
- Asian 2009, Seoul, Korea
- ISMVL 2009, Naha, Japan
- SAT 2009, Swansea, Wales
- CP 2009, Lisboa, Portugal
- EPIA 2009, Aveiro, Portugal
- SPECIF Congress 2010, Tours, France

Free software community events

- Fosdem 2009, Bruxelles, Belgium
- Solutions Linux 2009, Paris, France
- ConfSL 2009, Bologna, Italy
- DebConf 2009, Caceres, Spain
- Fossa 2009, Grenoble, France

4.1 IWOCE: a Mancoosi international workshop

As foreseen in the DOW, we organised a first international workshop on Mancoosi-related issues in Amsterdam, in August 2009. This workshop, named IWOCE for *International Workshop on Open Component Ecosystems* was affiliated to ESEC/FSE, one of the major software engineering conferences, all the papers presented at the workshop have been refereed, and the five accepted have been published in the conference proceedings.

The workshop was intimately related to the topics of interest of Mancoosi (the ecosystem of packages in FOSS distributions) and has generalized them for a wider audience. Roberto Di Cosmo and Paola Inverardi have chaired it.

The web site can be found at <http://www.iwoce.org/>, and the program was as follows:

- Marianne Simonot and Virginia Aponte. A declarative formal approach to dynamic re-configuration
- Davide Di Ruscio, Patrizio Pelliccione, Alfonso Pierantonio and Stefano Zacchiroli. Towards maintainer script modernization in FOSS distributions
- Daniel Le Berre and Pascal Rapicault. Dependency management for the Eclipse ecosystem
- Ralf Treinen and Stefano Zacchiroli. Expressing Advanced User Preferences in Component Installation
- Vasilis Boucharas, Slinger Jansen and Sjaak Brinkkemper. Formalizing Software Ecosystem Modeling

5 Mancoosi Publications

The following articles have been **published**:

- Strong Dependencies between Software Components, ESEM 2009, October 15-16, 2009, Lake Buena Vista, Florida, USA. By Pietro Abate, Jaap Boender, Roberto di Cosmo, and Stefano Zacchiroli.
- Autocompletion for Mashups, VLDB 2009, August 24-28, 2009, Lyon, France. By Ohad Greenshpan, Tova Milo and Neoklis Polyzotis.
- Expressing Advanced User preferences in Component Installation, IWOCE 2009 International Workshop on Open Component Ecosystem, affiliated with ESEC/FSE 2009. August 24, 2009, Amsterdam, The Netherlands. By Ralf Treinen and Stefano Zacchiroli.
- Towards maintainer script modernization in FOSS distributions, IWOCE 2009 International Workshop on Open Component Ecosystem, affiliated with ESEC/FSE 2009. August 24, 2009, Amsterdam, The Netherlands. By Davide Di Ruscio, Patrizio Pelliccione, Alfonso Pierantonio, and Stefano Zacchiroli.
- Bits for the Mancoosi Project, DebConf'09, July 28, 2009, Caceres, Spain. By Stefano Zacchiroli.
- On Solving Boolean Multilevel Optimization Problems, IJCAI 2009, July 11-17 2009, Pasadena, California, USA. By Josep Argelich, Ines Lynce, and Joao Marques-Silva.
- Managing dependent changes in coupled evolution, 2nd International Conference on Model Transformation (ICMT'09), June 29-30, 2009, ETH Zurich, Switzerland, by Antonio Cicchetti, Davide Di Ruscio and Alfonso Pierantonio.
- Towards a Framework for Distributed and Collaborative Modeling, International Workshops on Enabling Technologies (WETICE 2009), June 29 - July 1, 2009, Groningen, The Netherlands, by Antonio Cicchetti, Henry Muccini, Patrizio Pelliccione and Alfonso Pierantonio.
- Querying DAG-shaped Execution Traces Through Views, WebDB 2009, June 28, 2009, Rhode Island, USA. By Maya Ben-Ari, Tova Milo and Elad Verbin.

- New Encodings from Max-CSP into Partial Max-SAT, 39th International Symposium on Multiple-Valued Logic (ISMVL 2009), May 21-23, 2009, Naha, Okinawa, Japan, by Josep Argelich, Alba Cabiscol, Inês Lynce and Felip Manyà.
- Towards a Model Driven Approach to Upgrade Complex Software Systems, 4th International Working Conference on Evaluation of Novel Approaches to Software Engineering (ENASE 2009), May 6-10, 2009, Milan, Italy, by Antonio Cicchetti, Davide Di Ruscio, Patrizio Pelliccione, Alfonso Pierantonio and Stefano Zacchiroli.
- Optimized Union of Non-Disjoint Distributed Data Sets, EDBT'09, March 2009, Saint Petersburg, Russia, by Itay Dar, Tova Milo and Elad Verbin.
- Algorithms for Weighted Boolean Optimization, SAT'09, June 2009, Swansea, Wales, by Vasco M. Manquinho, Joao Marques-Silva and Jordi Planes.
- Sequential Encodings from Max-CSP into Partial Max-SAT, SAT'09, June 2009, Swansea, Wales, by Josep Argelich, Alba Cabiscol, Inês Lynce and Felip Manyà.
- Restoring CSP Satisfiability with MaxSAT, EPIA'09, October 2009, Aveiro, Portugal, by Inês Lynce and Joao Marques-Silva.
- Preprocessing in Pseudo-Boolean Optimization: An Experimental Evaluation, ModRef'09, affiliated with CP'09, September 2009, Lisbon, Portugal, by Ruben Martins, Inês Lynce and Vasco Manquinho.

The following articles have been **accepted** for publication:

- Enforcing Type-Safe Linking using Inter-Package Relationships, JFLA 2010. January 30 - February 02, 2010, La Ciotat, France. By Mehdi Dogguy, Stéphane Glondou, Sylvain Le Gall, and Stefano Zacchiroli.
- Using strong conflicts to detect quality issues in component-based complex systems, ISEC 2010, February 25-27, 2010, Bangalore, India. By Jaap Boender and Roberto Di Cosmo.
- Beernet: Building Self-Managing Decentralized Systems with Replicated Transactional Storage, International Journal of Adaptive, Resilient, and Autonomic Systems. By Boris Mejías and Peter Van Roy.

The articles above mention that the research carried out has received funding from the European Community's Seventh Framework Programme.

6 Conclusion

The project members have been very active in promoting the work done within the scope of the project and we consider this second year as successful in raising interest and disseminating the first results of Mancoosi.

We will keep promoting our research activities and results as much as possible by publishing more articles, attending FLOSS oriented conferences (FOSDEM 2010 will see at least two Mancoosi lightning talks) during the last remaining year of the project and through the organisation of a workshop at the end of the project, the aim of which will be to promote interest within the community for the Mancoosi research topics and technologies.

A Summary of Partners Dissemination Activities

Below are lists of the partners dissemination activities related to Mancoosi also available for the whole consortium on a page dedicated to Workpackage 6 (Dissemination) in the consortium wiki⁸.

A.1 Université Paris Diderot – Paris 7 (UPD)

Alongside setting up part of the Mancoosi collaborative infrastructure, members of Université Paris Diderot – Paris 7, as Coordinator of the project, have been keen on being very active all over the second year in carrying out dissemination activities related to Mancoosi.

Stefano Zacchiroli, Jaap Boender and Ralf Treinen attended the 2009 FOSDEM Conference⁹, on February 7-8, 2009.

Ralf Treinen gave on March 5, 2009 a Seminar at the laboratory Proofs, Programmes, Systems, in Paris, France; on March 5, 2009. In this talk, he described the past and ongoing work in the context of Mancoosi and its predecessor project EDOS, as well as some possible future research directions.¹⁰

Roberto Di Cosmo attended the Solutions Linux Trade, on March 31, 2009, in Paris, France; where he gave a presentation of the Mancoosi project.¹¹

Ralf Treinen went to The National Institute of Advanced Industrial Science and Technology (AIST Kansai), in Osaka, Japan, on April 2009 to work in collaboration with Hitoshi Ohsaki. There he was invited to give a talk about the Mancoosi project at the Workshop on Software Verification (WSV 2009), on April 10, 2009

Roberto Di Cosmo was invited by the Ecole des Mines in Nantes, France, on May 14, 2009, to give a Conference in the Computing Department. This conference topic was: Managing the complexity of open source softwares: the case of Linux distributions. So, it has been a good opportunity to give an overview of the Mancoosi project.¹²

Roberto Di Cosmo attended the Collaboration Meeting for FP6 and FP7 projects on objective 1.2 organised by the European Commission DG Information Society, on June 10-11, 2009, in Brussels, Belgium. A poster giving an overview of the Mancoosi project was presented there.

Roberto Di Cosmo attended the Italian Conference on Free Software (ConfSL 2009)¹³, on June 12-13, 2009.

Ralf Treinen attended the Conference on Rewriting, Deduction and Programming (RDP 2009)¹⁴, from June 28 to July 3, 2009

Roberto Di Cosmo, Ralf Treinen, Jaap Boender and Stefano Zacchiroli attended the International Workshop on Open Component Ecosystems (IWOCE 09), in Amsterdam, the Netherlands

⁸<http://wiki.mancoosi.org/bin/view/Project/WP6>

⁹<http://archive.fosdem.org/2009/>

¹⁰<http://www.pps.jussieu.fr/seminaire/sem2009/abstracts/treinen>

¹¹<http://www.toolinux.com/lininfo/toolinux-information/communiquer/article/solutions-linux-2009-agenda-charge>

¹²<http://www.toolinux.com/lininfo/toolinux-information/evenements-et-seminaires/article/une-conference-par-roberto-di>

¹³<http://www.confsl.org/confsl09/>

¹⁴<http://rdp09.cic.unb.br/>

on August 2009.

Stefano Zacchiroli attended the DebConf 2009, the annual Debian Developers meeting, on July, 16-23, 2009, in Caceres, Spain ¹⁵. He delivered a talk where he presented a status update about the Mancoosi project. The talk has also addressed some new usages we are doing of EDOS tools (currently maintained by Mancoosi project members) for Quality Assurance purposes.

Roberto Di Cosmo presented an overview of Mancoosi at the Open World Forum 2009 on October 02, 2009 in Paris, France ¹⁶.

Jaap Boender attended ESEM 2009 Conference, on October 2009, in Orlando, USA. There he presented a Mancoosi paper dealing with ideas for using strong dependancies to measure several properties of component-based systems ¹⁷.

Roberto Di Cosmo attended the First Conference on Free and Open Source Software and Academia (FOSSA 2009) on November 17-18, 2009, in Grenoble, France ¹⁸. At this occasion, he had the opportunity to present, in a talk, the work done on the mancoosi project.

Ralf Treinen attended the Asian Computing Science Conference 2009 (Asian 2009), on December 14-16, 2009, in Seoul, Korea ¹⁹.

Roberto Di Cosmo attended the SPECIF Congress, on January 2010, in Tours France. He gave a talk on Open Source Softwares and their implications. ²⁰

A.2 Edge-It (EDGE)

Edget-It has been involved in dissemination activities for the MANCOOSI project.

The MANCOOSI project was presented by Arnaud Lapr v te at the Solutions Linux Open Source exhibition (Parc des Expositions, Paris, France), March 31, 2009²¹.

Mandriva wrote a paper about its presence on Solution Linux for Mancoosi on its blog ²² and on its website²³ about this event on March 25, 2009.

Edge-IT is using the research project blog of Mandriva started in July 2009 to publish news on Mancoosi : <http://doc4.mandriva.org/bin/view/labs/Blog> . The integration of dufd generation in urpmi was announced there, as well as the availability of the site that collects the files. The leaflet of Mancoosi was announced in january on the site, as well as the LoCoCo conference.

During the press conference of the launch of the Mandriva 2010 distribution (3rd of November 2009, on the Ice B ar of H agen - D azs on the Champs Elys es), a short explanation of the opt-in mechanism for uploading the configuration description of a machine (dufd), when installation / upgrade problems are encountered was explained, as well as the reasons and the link to the Mancoosi project.

Mandriva wrote about Mancoosi in its newsletter of june 2009, sent to hundred of thousands

¹⁵<http://debconf9.debconf.org/>

¹⁶<http://openworldforum.org/>

¹⁷<http://www.csc2.ncsu.edu/conferences/esem/?p=location>

¹⁸<http://www.ow2.org/view/Events/fOSSaConferenceGrenobleFrance>

¹⁹<http://asian09.cylab.cmu.edu/>

²⁰<http://www.specif.org/>

²¹<http://www.solutionslinux.fr/>

²²<http://blog.mandriva.com/fr/2009/03/25/mandriva-a-solutions-linux-2009/>

²³<http://www.mandriva.com/enterprise/fr/societe/presse/mandriva-sera-present-au-salon-solutions-linux-2009>

users of Mandriva Linux.

A.3 Università Degli Studi dell'Aquila (UDA)

Members of Università Degli Studi dell'Aquila took part in dissemination activities during the second year of the project as described in the following.

Davide Di Ruscio attendend the International Conference on Evaluation of Novel Approaches to Software Engineering (ENASE 2009)²⁴. There he presented a paper about the Mancoosi model-driven approach to simulate the upgrade of FOSS systems;

Davide Di Ruscio and Alfonso Pierantonio attended the International Conference on Model Transformation (ICMT 2009)²⁵. There they presented a paper about problems which are related to the evolution of the Mancoosi metamodel.

Davide Di Ruscio, Patizio Pelliccione and Alfonso Pierantonio attended the International Workshop on Open Component Ecosystems (IWOCE 2009)²⁶. There they presented a paper about the maintainer scripts analysis which has been performed to define the Mancoosi metamodel.

Patrizio Pelliccione attended the International Workshops on Enabling Technologies: Infrastructures for Collaborative Enterprises (WETICE 2009)²⁷. There he presented a work which proposes a framework for synchronous and asynchronous concurrent and collaborative modeling. The approach offers services for sharing the modeling space, models, documentation, and configuration.

Alfonso Pierantonio has been keynote speaker at MDWE 2009 on June 22th, 2009, San Sebastian, Spain. There he gave a talk about model-driven aspects which are related to the modeling activities which are carried on in the context of the Mancoosi project.

A.4 Instituto de Engenharia de Sistemas e Computadores Investigação e Desenvolvimento em Lisboa (INESC-ID)

Members from INESC-ID have been disseminating the Mancoosi project mainly through the participation in conferences and workshops. The presentations given at these events, and also published in the proceedings of such events, were mainly about tools used to solve the software package upgradability problem. These tools are based in Boolean Satisfiability (SAT) and its extensions, such as Maximum Satisfiability (MaxSAT) and Pseudo-Boolean Optimization (PBO). It is therefore important not only to effectively solve the upgradability problem but also to improve the performance of SAT-based tools.

Josep Argelich attended the 39th International Symposium on Multiple-Valued Logic (ISMVL 2009)²⁸ which took place in Japan. He presented a paper about converting MaxCSP into MaxSAT.

Josep Argelich and Vasco Manquinho attended the 12th International Conference on Theory and Applications of Satisfiability Testing (SAT 2009)²⁹ which took place in Wales. Josep Argelich

²⁴ENASE2009 : <http://www.enase.org/ENASE2009/>

²⁵ICMT 2009 : <http://www.model-transformation.org/ICMT2009/>

²⁶IWOCE 2009 : www.iwoce.org

²⁷WETICE 2009 : <http://tbk15.fwn.rug.nl/wetice2009/>

²⁸<http://cs3.el.gunma-u.ac.jp/ISMVL2009/>

²⁹<http://www.cs.swan.ac.uk/~csoliver/SAT2009/>

presented a paper about another conversion of MaxCSP into MaxSAT and Vasco Manquinho presented a paper about a new algorithm for MaxSAT and PBO.

Inês Lynce and Josep Argelich attended the 21st International Joint Conference on Artificial Intelligence (IJCAI 2009) ³⁰ which took place in the USA. They presented a paper about SAT-based multi-criteria optimization for solving the upgradability problem.

Inês Lynce and Vasco Manquinho attended the 15th International Conference on Principles and Practice of Constraint Programming (CP 2009) ³¹ which took place in Portugal. They presented a paper about preprocessing in PBO.

Inês Lynce attended the 14th Portuguese Conference on Artificial Intelligence (EPIA 2009) ³² which took place in Portugal. She presented a paper about restoring the satisfiability of a given problem instance.

A.5 Caixa Mágica Software (CXA)

As leaders of Workpackage 3 on Transactional Upgrades, members of Caixa Mágica took part in the dissemination activities listed below.

Paulo Trezentos gave a presentation of projects in which Caixa Mágica is involved, including MANCOOSI, at the Linux 2009 – VI Encontro de Tecnologias Abertas event, hosted by Caixa Mágica and Sybase on September 24th, 2009 in Lisbon, Portugal. Around seven hundred Portuguese Linux users and clients attended this event.

In Exame Informatica no. 173, p 86/87, November 2009, Paulo Trezentos and Pedro Fragoso, discuss the uptake and increasing popularity of Linux and Open Source Software in Portugal, specifically the education system. They mention the benefit of community orientated and supported software. In the article they mention how systems such as DUDF, (accompanied by an image of the dudf.caixamagica.pt webpage) can be used to get real user feedback for package installations and problems. The main focus is on the benefit of working as a community and DUDF is shown as an example of how feedback from users can assist others to benefit from open source software.

A.6 Université de Nice Sophia Antipolis (UNSA)

CeP has been involved in dissemination activities for the MANCOOSI project.

The MANCOOSI project was advertised at the Journée méditerranéenne du logiciel libre (JM2L³³).

Michel Rueher took part to the organization of BR-OPT, a workshop on bound reduction techniques for constraint programming and mixed-integer nonlinear programming, at the Tepper School of Business, Carnegie Mellon University, Pittsburgh, PA 28 May, 2009³⁴.

Jean Charles Régim and Michel Rueher took part to CPAIOR'09 ³⁵. Tepper School of Business, Carnegie Mellon University, May 27-31, 2009.

³⁰<http://ijcai-09.org/index.html>

³¹<http://centria.di.fct.unl.pt/conferences/cp2009/>

³²<http://epia2009.web.ua.pt/>

³³<http://jm2l.linux-azur.org/>

³⁴<http://www.cs.utep.edu/mceberio/Research/br-cpaior09>

³⁵<http://wpweb2.tepper.cmu.edu/rlang/CPAIOR09/index.html>

Michel Rueher took part to the TORONTO'09 CORS-INFORMS meeting³⁶. Toronto, Ontario, Canada, where he did a presentation on “Capabilities of constraint programming in software verification”.

A.7 Tel Aviv University (TAU)

Mainly active in Workpackages 2 and 3, members of Tel Aviv University have been involved in dissemination activities related to Mancoosi as described below.

Tova Milo and Maya Ben-Ari attended the 2009 ACM Special Interest Group on Management Of Data (SIGMOD' 09), on June 2009, in Providence, USA. There they gave a presentation regarding a paper (published at the the WebDB'09 workshop of the conference) discussing a novel technique for efficiently analyzing software execution logs (traces), developed as part of the Mancoosi research.

Tova Milo and Ohad Greenshpan had attended the 2009 International conference on Very Large Databases, VLDB'09, that took place in Lyon, France, in August 2009. They gave there a presentation regarding a paper, (published at the conference), describing newly developed algorithms which assist users in software composition, by automating the retrieval of relevant software components.

Tova Milo has presented an overview of the group's research in the Mancoosi project at the Computer Science Seminar of the Weizmann Institute on January 4, 2010.

A.8 Université catholique de Louvain (UCL)

Boris Mejías and Peter Van Roy published an article on decentralized transactional storage to appear in the International Journal of Adaptive, Resilient, and Autonomic Systems. This article is a collaboration between MANCOOSI and the SELFMAN project. Boris Mejías has an accepted lightning talk on this topic at FOSDEM 2010 on Feb. 6, 2010.

Boris Mejías attended the 9th Free and Open Source Software Developers' European Meeting (FOSDEM 2009), on Feb. 7-8, 2009, in Brussels, Belgium. He also attended the XtremOS Summer School in Sep. 2009 on emergent computing paradigms for large-scale distributed computing. He made a presentation at this Summer School. XtremOS is a Linux-based operating system that includes distributed computing infrastructures such as Grid functionality.

Gustavo Gutierrez and Yves Jaradin released an alpha version of the relational constraint solver for Gecode under an MIT Open Source license (see www.gecode.org). The solver was announced on the Gecode mailing list. The solver is available at <https://scm.info.ucl.ac.be/trac/cpbinrel>. This solver simplifies the original graph constraint solver and provides better expressiveness for the package installability problem.

³⁶<http://meetings2.informs.org/Toronto09/index.html>

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mancoosi

managing software complexity

www.mancoosi.org

Solving the upgrade problem

- ➔ Better, more flexible upgrades
- ➔ Rollback unwanted upgrades

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Web Site

➔ www.mancoosi.org

Blog

➔ blog.mancoosi.org

Managing the Complexity of the Open Source Software



Why Mancoosi ?

Did you ever install an upgrade on your PC, just to find out afterwards that something very important was not working anymore? The problem is that, especially when you think about large, complex software packages, there is no general way to know if a software package, with all its dependencies on obscure libraries, configuration files, hardware components or security setup, will work properly on a specific computer. That is, there is no way to know it BEFORE actually installing it, and before finding out the hard way that it has destroyed something else.



Better upgrades

Installing a software component can be a puzzle: if there are several possibilities on how to satisfy its dependencies, the system may ask the user obscure questions, and finally choose one solution using its own blind algorithm, which may lead to remove other useful packages, and leave the user in the dark.

Mancoosi will develop sophisticated optimization algorithms to find efficient upgrade paths and high level request languages which will make software upgrading a simpler process for any user, not only for experienced computer wizards.

Outcomes :

Safer, more flexible package installers.
Better reporting for failed upgrades.

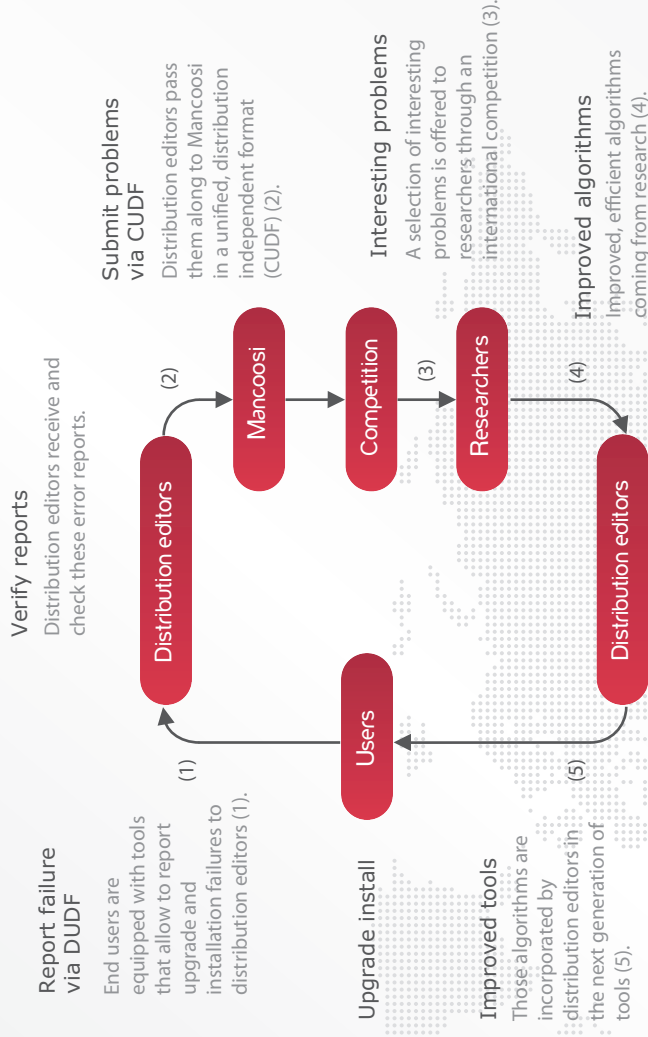


Rollback solutions

No matter how significant the advances in theory, we know there will always be the possibility the installation process fails or is not what the user really wanted. Mancoosi is also building a transactional layer into end-user package management tools, which will allow to bring your system back to a previous state ("rollback") without further problems, working at the level of individual components, and not on file-system checkpoints.

Outcomes :

Tools and techniques to safely and selectively undo package installation



Check reports
Distribution editors receive and check these error reports, and pass them on to researchers (2) who refine their models describing the effect of package installation and removal (3).

