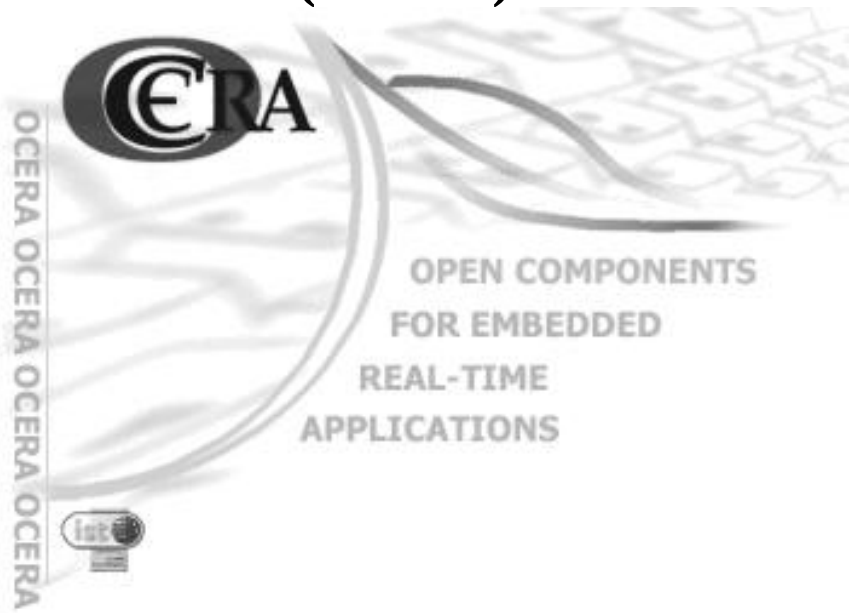
WP11 - Dissemination and Implementation (WWW)



D11.4 OCERA Web site report and statistics

D11.4 OCERA Web site report and statistics
by S. Saez and A. Crespo

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CR	4	CEA/DRT/LIST/DTSI	CEA	FR
CR	5	Unicontrols	UC	CZ
CR	6	MNIS	MNIS	FR
CR	7	Visual Tools S.A.	VT	E

Document version

Release	Date	Reason of change
1_0	31/01/05	First release

Chapter 1. Introduction

This deliverable describes the main structure of the OCERA web site providing design criteria and organisation of the different sections.

The deliverable is completed with some statistics that give an idea about the success of the web site. This statistical information resumes accesses, most popular documents and most downloaded components.

Chapter 2. Web structure

2.1. Introduction

This section deals with how the OCERA web site has been organized and the project results that can be accessed from this website.

Next a brief roadmap of the website is shown. The main axis is the download section, where the main contributions of this project are publically accessible.

- Information
    - What is OCERA?
    - Partners
    - Technical support
    - License issues
    - Links
    - News
    - Web statistics
- Download
    - Documents
        - Deliverables
        - Documentation
        - Technical reports
        - Dissemination
    - Components
        - Resource management components
        - Scheduling components
        - Fault-Tolerance components
        - Communication components
    - Distributions
        - Full releases
        - Partial releases
    - Tools
        - Test suites

Figure 1 OCERA website roadmap

Next sections detail the contents of each website part and how each part can be reached.

2.2. Web page structure

Each page of the web site has a common structure that eases the navigation process once the user has came familiar with this structure.

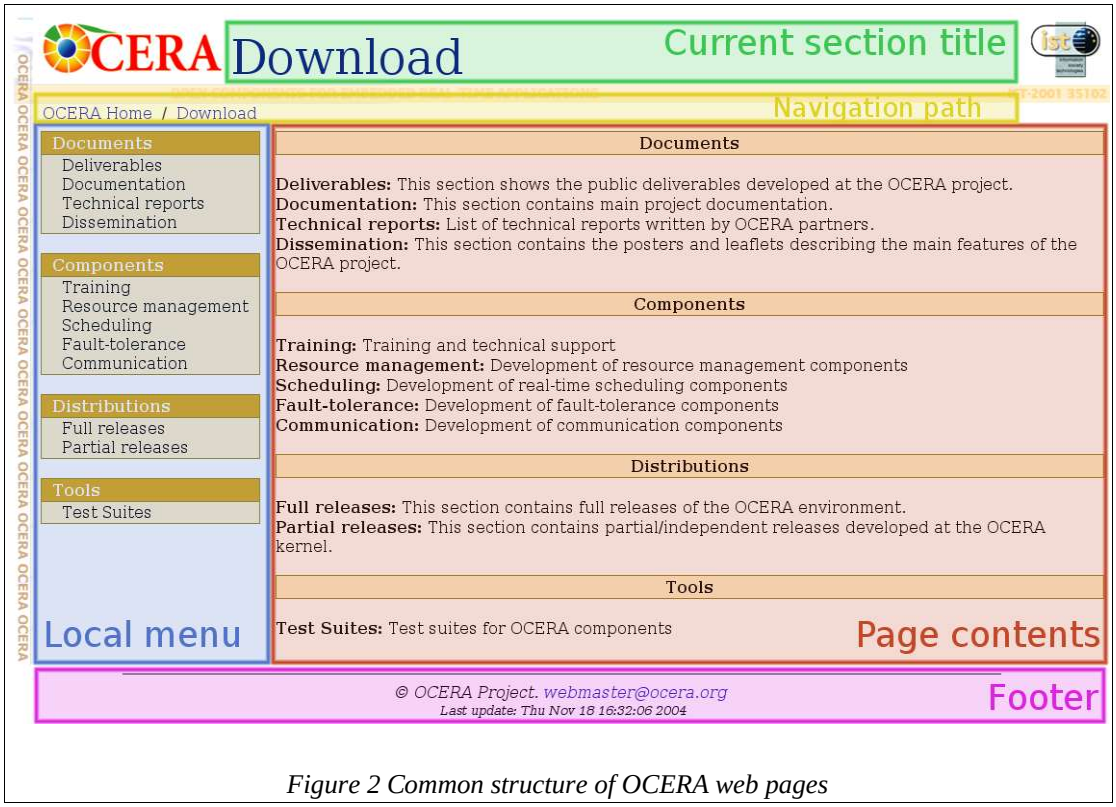


Figure 2 Common structure of OCERA web pages

The Figure 2 shows the structure of a typical web page. This page is clearly divided in several information areas:

- **Header or Current section title**: This area presents to the user the long title of the current section inside the web site.
- **Navigation path**: This area offers direct access to current page parents in the website tree.
- **Local menu**: This menu offers direct access to the sections and subsection that can be reached from the current page.
- **Page contents**: On intermediate pages, this area shows a brief description of the sections and subsections that are bellow in the website tree. On leaf pages, this area shows the information corresponding to type of page (component details, documentation information, etc.).
- **Footer**: this area simply shows the contact information for website issues and the last modification date.

Once described the structure of a typical web page, next sections describe the main contents that can be found through the OCERA website.

2.3. Main page

The main page of the OCERA website describes the main goals and achievements of the project, and shows the latest news related to project. From the local menu the visitor has access to the main sections of the website: information about the project and downloadable results.

The Figure 3 shows the current state of the home page.

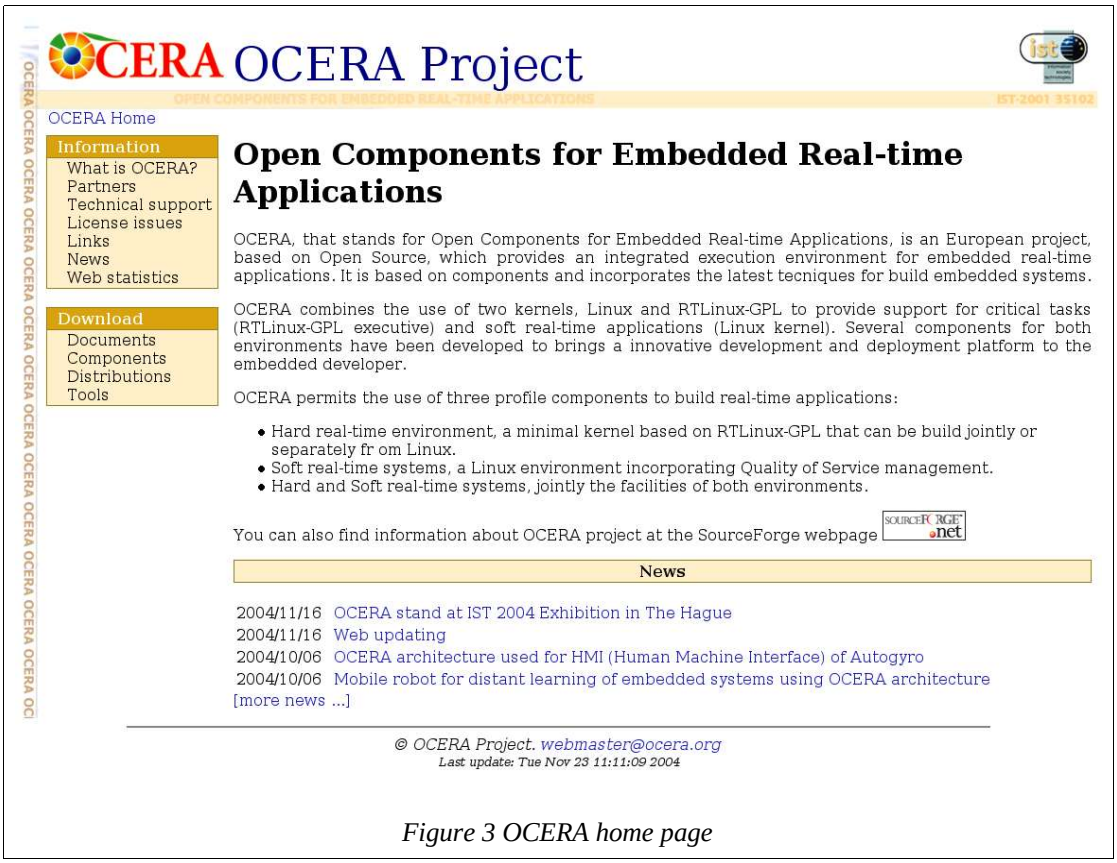


Figure 3 OCERA home page

2.4. Project information section

One of the main sections of this webpage is the information section. This section offers visitors information about the project, including contact information, a more detailed description of the OCERA project, technical support details (documentation and source, online support and developers support), license issues related to developed software, related links, full list of project-related news and a brief summary of website statistics.

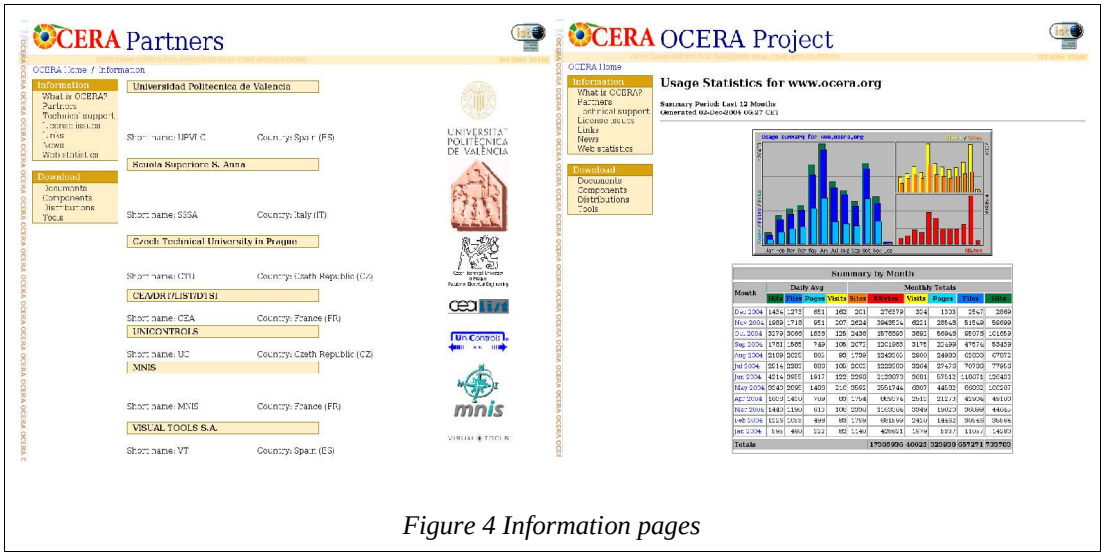


Figure 4 Information pages

The Figure 4 shows two examples of pages from this section: partners information and web statistics.

2.5. Download section

This is the most important area of the project website. From this section the visitor can access to main results of the project. This page is the root of a full hierarchy of pages describing the results, mainly documentation and software, that the user can download.

This section is subsequently organized in: documents, components, software distributions and tools. A brief description of the items that compound each section are described in this page, as Figure 5 shows.

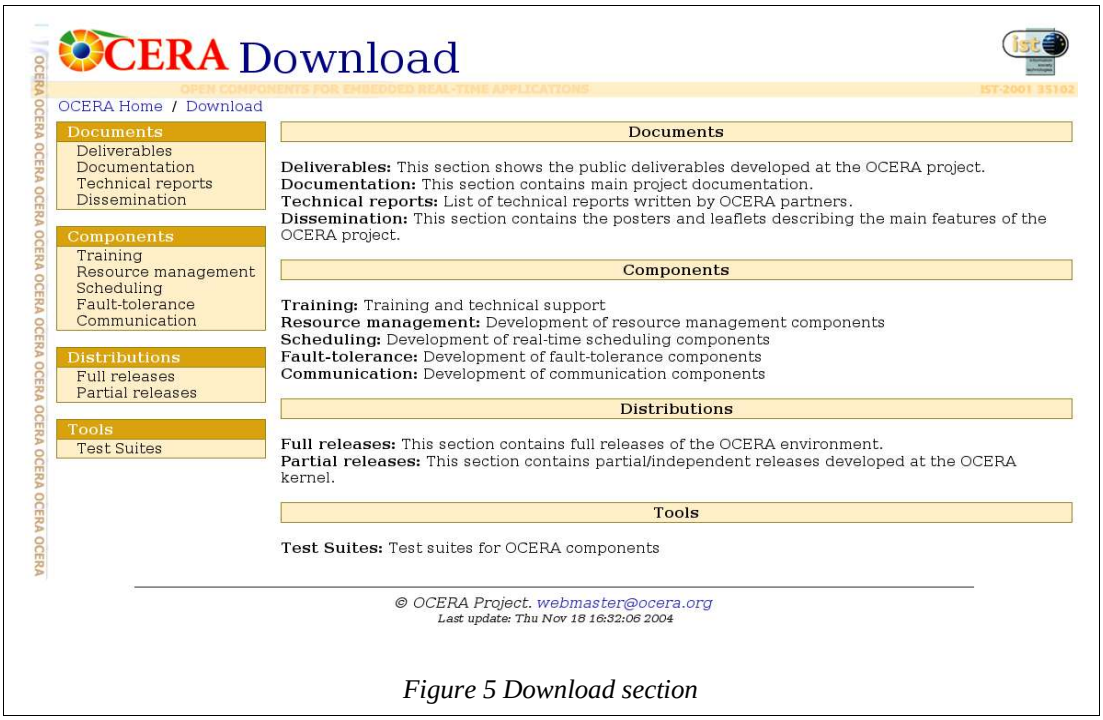


Figure 5 Download section

Documents

All the documents elaborated at the OCERA project or by the project partners on OCERA related issues are included and accessible from this section.

The available documents are organized as follows:

- **Deliverables**: This section shows the public deliverables developed at the OCERA project. This section organized the prohject documentation chronologically.
- **Documentation**: This section contains main project documentation organized by categories: RTOS analysis, architecture, market analysis, resource management, scheduling, fault-tolerance and communication
- **Technical reports**: List of technical reports written by OCERA partners.
- **Dissemination**: This section contains the posters and leaflets describing the main features of the OCERA project.

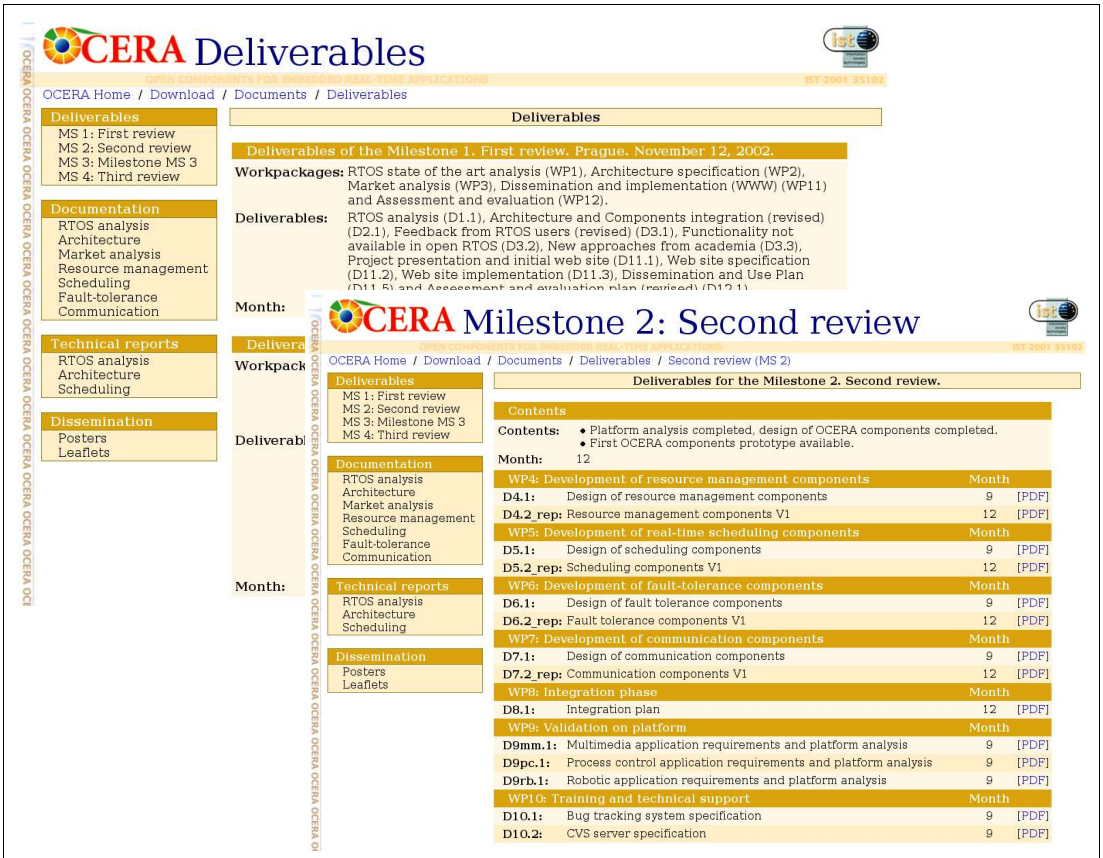


Figure 6 Deliverables web pages

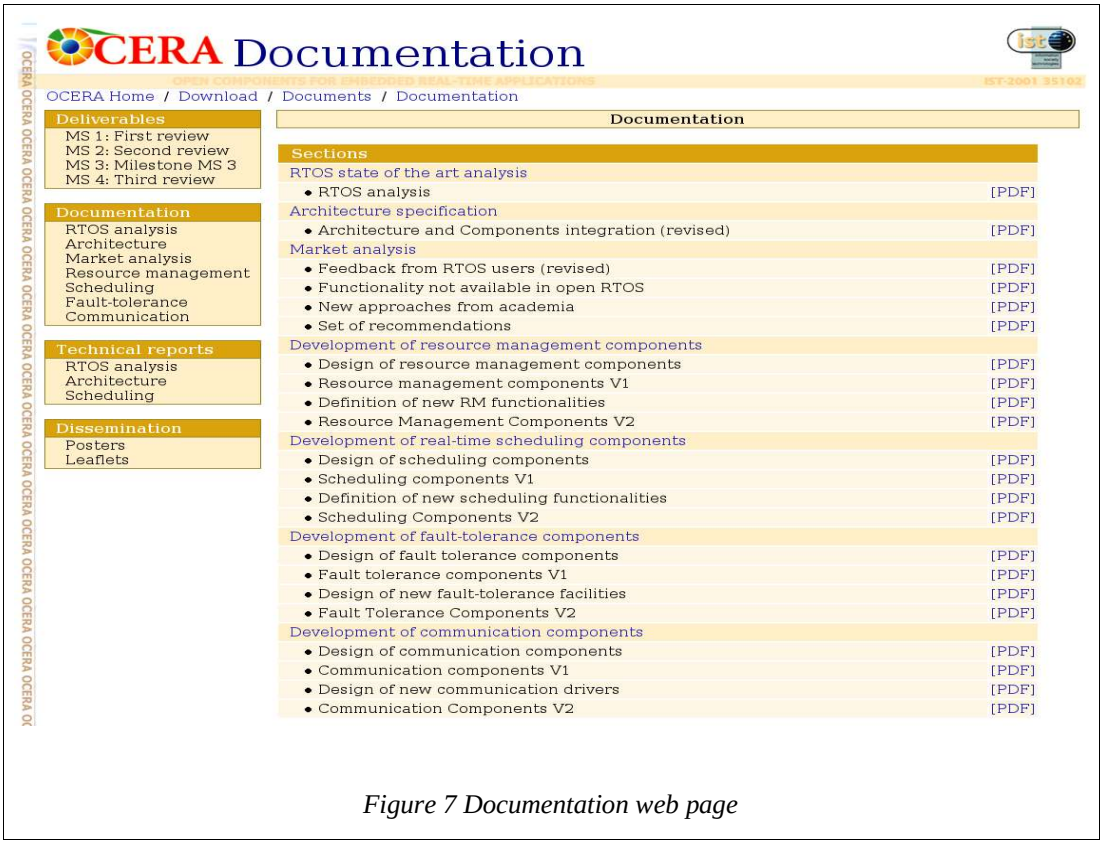


Figure 7 Documentation web page

Figure 8 Technical reports web pages

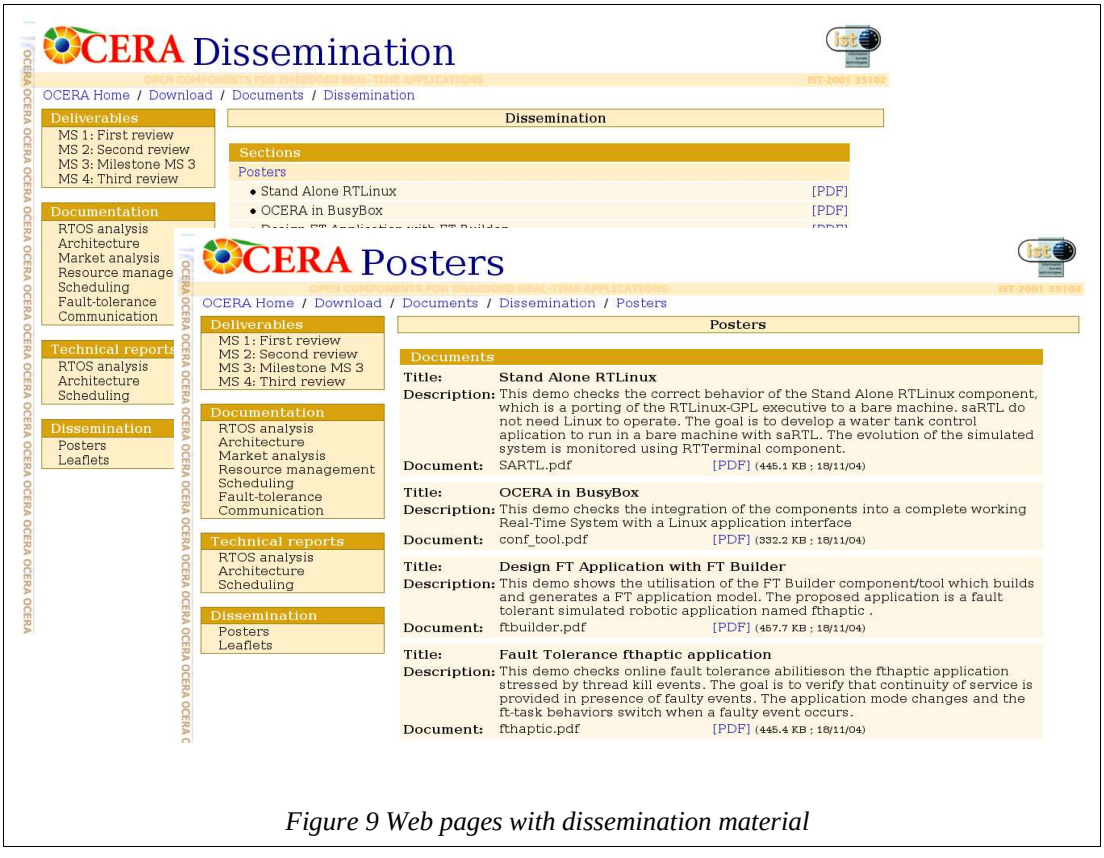


Figure 9 Web pages with dissemination material

Figures 6, 7, 8 and 9 show some examples of document section web pages. In these pages, associated to each document, a detailed information about the authors, participants, description, keywords, document size and date of modification can be found.

Components

Components section is the barebone of this website. From this page a full description and detailed information of any software component developed in the OCERA project can be found. The components web page shown in Figure 10 show a full list of available components, together with the current component status and version information. Components are organized by working packages, giving rise to four main subsections: Resource management, Scheduling, Fault-Tolerance and Communication components.

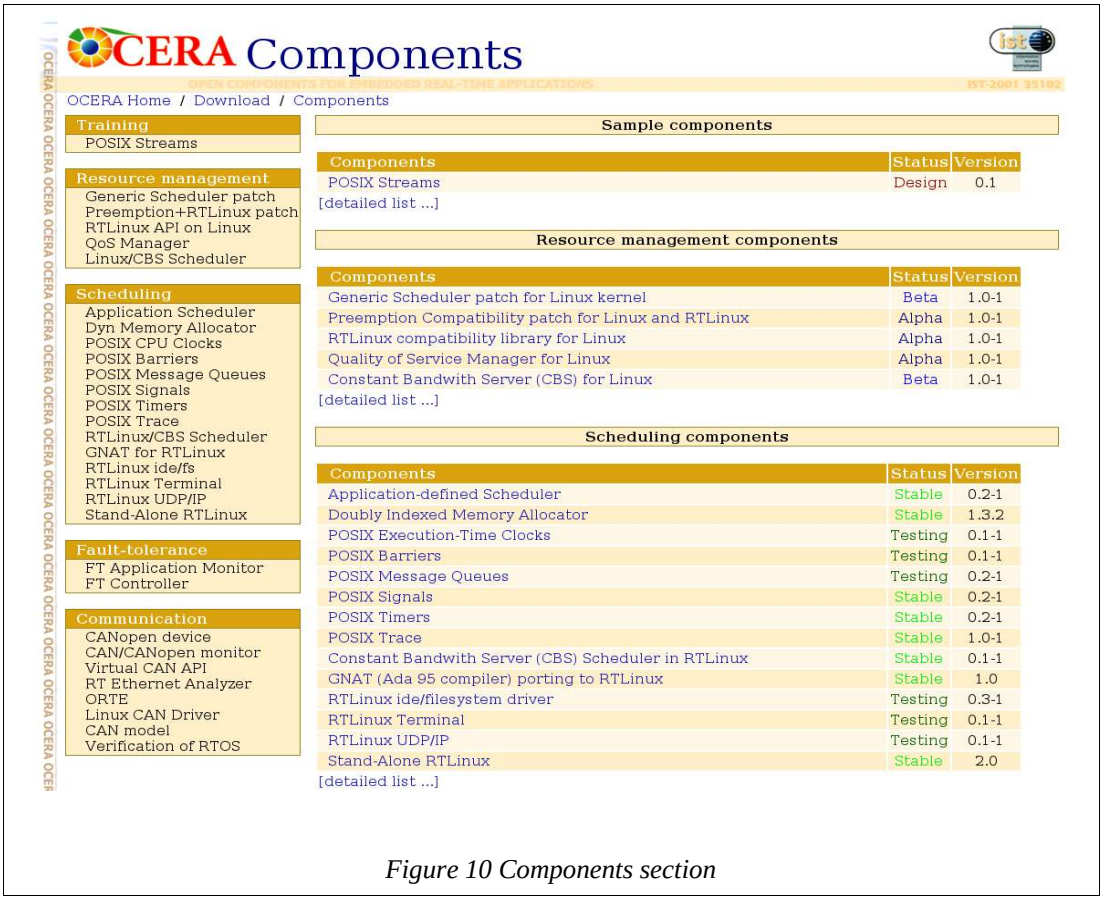


Figure 10 Components section

From this page several pages with different levels of description can be reached. Figure 11 shows a more deatiled list of scheduling components with a brief descrption of each component, some keywords, current version and status information.

If a more detailed description is required, the concrete component web page is shown. This web page contains all the component information about that component, as shown in Figure 12. This information includes the previously shown description with additional information about developers, involved partners, related workpackage, documentation where the component is described, software licenses, processor and operating system platforms and a list of dependencies with other components.

A link to the source code is also provided in this page, including a local copy of the component and a link to the component's directory at the sourceforge CVS.

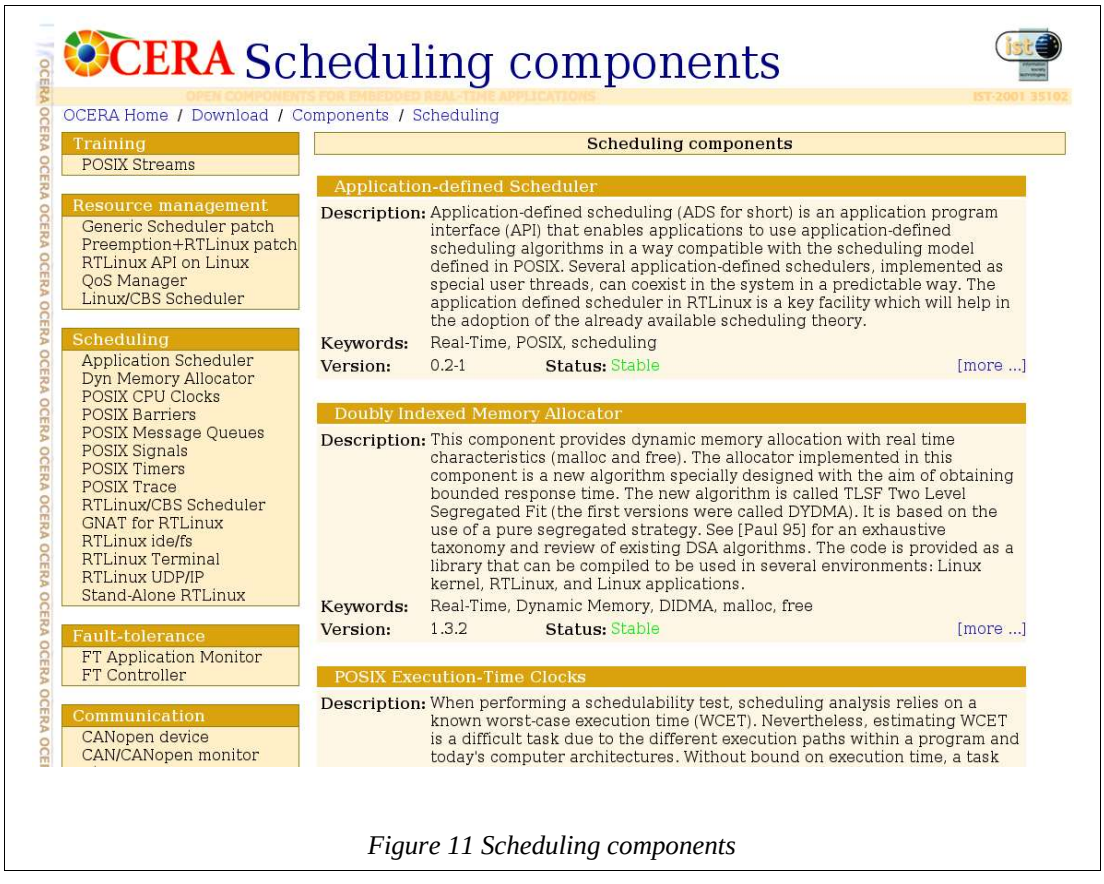


Figure 11 Scheduling components

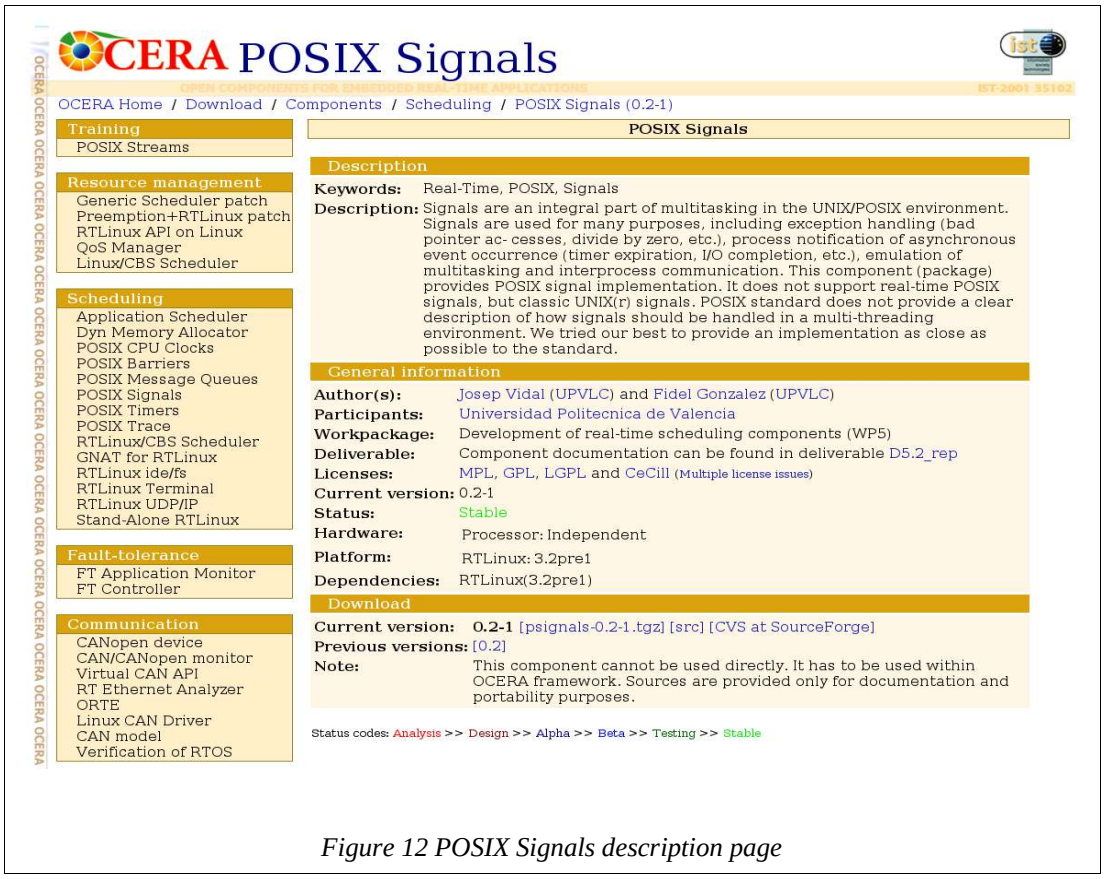


Figure 12 POSIX Signals description page

Distributions

As a final result of the development performed at the project and after an the correponding integration phase, a full OCERA framework distribution has been obtained. This framework allows to take advantage of all the new developed real-time components in an integrated manner. The OCERA framework can be obtained from the distributions web page.

Also a small number of developments that can be used in a standalone manner has been made accessible from this page under the name of partial releases. The Figure 13 shows the web page of this section.

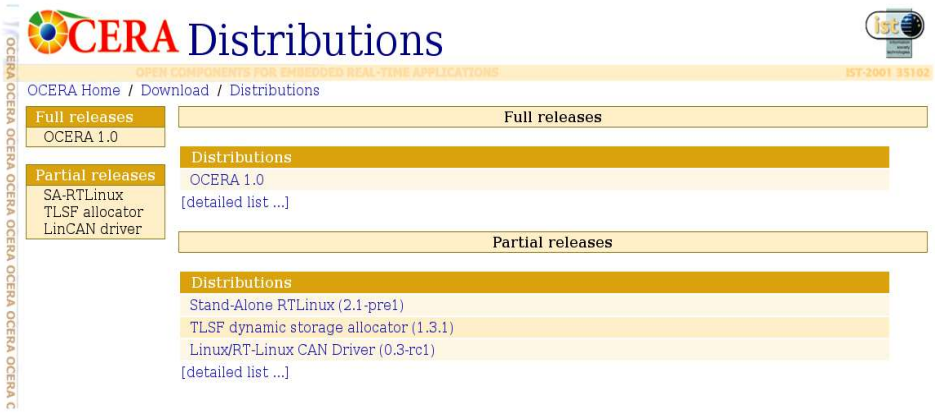


Figure 13 Distributions section

If one of these distributions is selected a full description of the contained software is shown. These pages present a description of the software and its main features, together with the services and provided capabilities, execution platforms and supported programming languages. An example of the OCERA framework distribution can be found in Figure 14.

Tools

This section only contains a preliminary version of the OCERA test suite that was integrated into the OCERA distribution. Some software monitors and development tools included as software component in the fault-tolerance and communication sections can also be placed here in a near future.

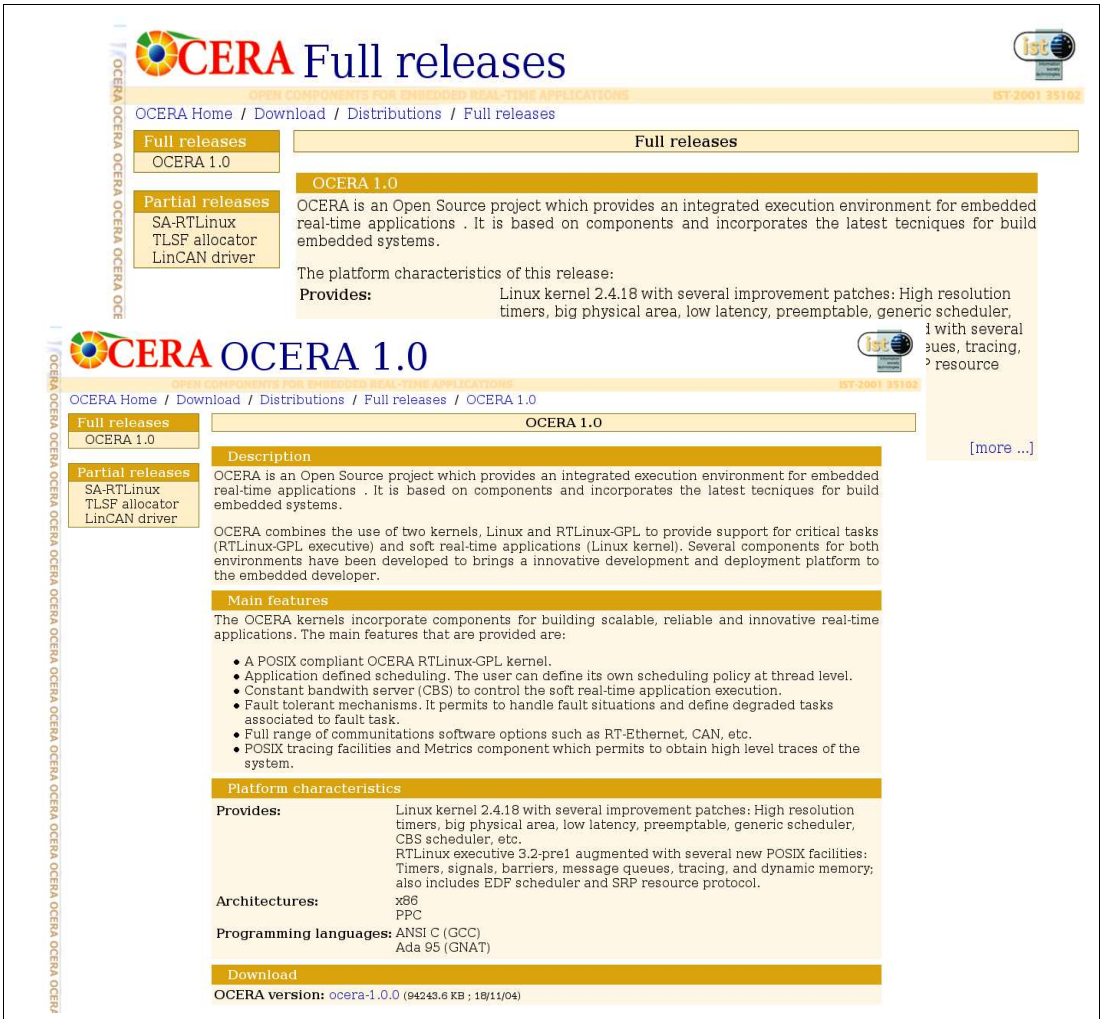


Figure 14 Full OCERA distribution page

Chapter 3. Dissemination indicators

The OCERA web site was designed for dissemination purposes, so the success of this goal can be, at this moment, evaluated in terms of number of accesses to the different parts of the web. Of course, this is not a criteria for the evaluation of the project, it is only a indicator of the success or not of the dissemination process using the web. We concentrate the analysis in the period January-July of 2003 because ii is the period when the information was more mature.

Several indicators can be used to analyze the results:

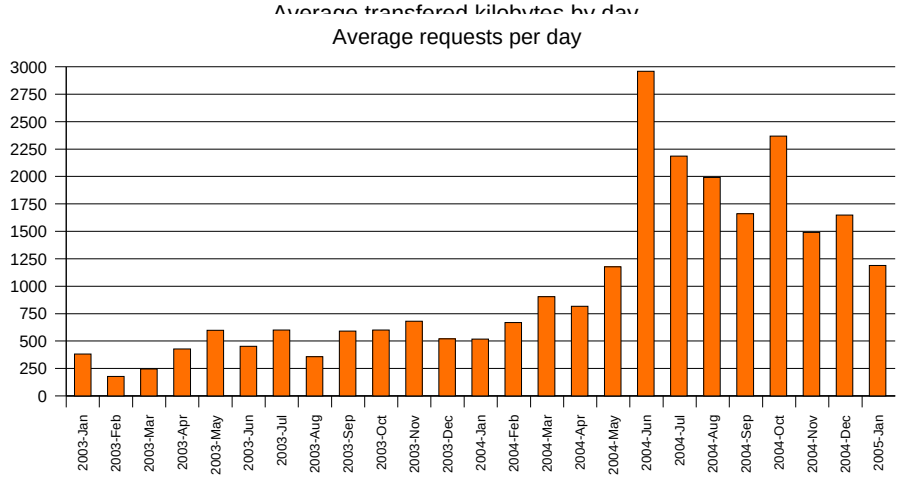
- General statistics
- Average hits per month
- Geographical location for the visitors
- Number of downloads and most requested files
- OCERA in Goggle

3.1. General statistics

This is a summary of the web reporting.

Item	Value
Summary Period	Dec 29 2002 to Feb 1 2005
Requests Received	744761
Bytes Transmitted	22.89 gigabytes
Average Requests Received	1022
Average Bytes Transmitted	32.16 megabytes
Total days	729

The following figures show the evolution of OCERA web site impact in transferred kilobytes and requests per day.



3.2. Geographical location for the visitors

The following table shows the domain distribution of the users. Only the top 30 domains have been listed.

Domain Name	Requests	%	Megabytes	%
Commercial (.com)	408632	23,58	5526,29	54,87
Network (.net)	66258	13,22	3099,77	8,89
France (.fr)	12098	4,96	1163,06	1,62
Spain (.es)	11295	7,46	1747,66	1,52
Czech Republic (.cz)	9829	1,90	445,36	1,32
Portugal (.pt)	9027	2,66	624,63	1,21
Italy (.it)	8868	2,34	547,68	1,19
Germany (.de)	7565	3,87	907,11	1,01
China (.cn)	5476	0,49	115,69	0,74
Japan (.jp)	5137	1,68	393,31	0,69
Educational (.edu)	5133	1,11	259,81	0,68
Lithuania (.lt)	4279	1,16	272,7	0,57
India (.in)	3711	0,62	144,8	0,50
Poland (.pl)	3443	1,96	458,48	0,46
Netherlands (.nl)	3179	0,62	146,38	0,43
Switzerland (.ch)	2663	0,29	68,48	0,36
Brazil (.br)	2405	0,41	96,57	0,32
Canada (.ca)	2184	0,38	88,73	0,29
Sweden (.se)	2102	0,86	201,33	0,28
Australia (.au)	2090	0,38	88,97	0,28
Mexico (.mx)	1837	0,26	60,73	0,25
Belgium (.be)	1742	1,02	239,05	0,23
Austria (.at)	1583	0,39	92,11	0,21
United Kingdom (.uk)	1437	0,35	82,94	0,19
Russian Federation (.ru)	1417	0,37	87,07	0,19
Korea (South) (.kr)	1328	0,23	53,1	0,18

3.3. Number of downloads and Most requested files

To detect which are the most interested documents downloaded, next table shows the list of the top 30 documents (pdf documents) sorted by the number of hits.

Document path	Hits
/archive/deliverables/ms1-month6/WP1/D1.1.pdf	3541
/archive/deliverables/ms1-month6/WP2/D2.1.pdf	3084
/archive/deliverables/ms1-month6/WP3/D3.2_Not_in_Open_RTOS/D3.2.pdf	1595
/archive/upvlc/public/reports/architecture/Arch_db.pdf	1416
/archive/deliverables/ms2-month12/WP5/D5.1.pdf	1154
/archive/deliverables/ms1-month6/WP3/D3.3_New_Approaches/D3.3.pdf	1123
/archive/deliverables/ms2-month12/WP5/D5.2_rep.pdf	1086
/archive/deliverables/ms2-month12/WP7/D7.1.pdf	926
/archive/deliverables/ms1-month6/WP3/D3.1_Feedback/D3.1.pdf	920
/archive/upvlc/public/reports/whitepaper/whitepaper.pdf	892
/archive/deliverables/ms2-month12/WP9/D9pc1.pdf	847
/archive/deliverables/ms1-month6/WP11/D11.1/D11.1.pdf	824
/archive/deliverables/ms2-month12/WP9/D9rb1.pdf	696
/archive/deliverables/ms3-month18/WP10/D10.3.pdf	645
/archive/upvlc/public/reports/memory-protection/memory-protection.pdf	616
/archive/deliverables/ms4-month24/WP11/dissemination.pdf	590
/archive/deliverables/ms3-month18/WP5/D5.3.pdf	572
/archive/deliverables/ms2-month12/WP10/D10.2.pdf	568
/archive/deliverables/ms2-month12/WP4/D4.1.pdf	559
/archive/deliverables/ms4-month24/WP5/D5.4.pdf	554
/archive/deliverables/ms1-month6/WP12/D12.1_Assesment/D12.1.pdf	532
/archive/deliverables/ms3-month18/WP10/D10.4.pdf	531
/archive/deliverables/ms2-month12/WP4/D4.2_rep.pdf	524
/archive/deliverables/ms2-month12/WP7/D7.2_rep.pdf	515
/archive/deliverables/ms2-month12/WP9/D9mm1.pdf	505
/archive/deliverables/ms4-month24/WP7/D7.4.pdf	504
/archive/deliverables/ms2-month12/WP6/D6.1.pdf	493

With respect to the components, next table shows the number of downloads of most popular components that are distributed in the OCERA web site. Other components (as POSIX Timers, POSIX Signals, etc) are included in the new release of the GPL RT Linux.

Component name and version	Hits
/archive/ctu/public/components/lincan/lincan-0.2.tgz	237
/archive/ctu/public/components/candev/candev-0.91.tgz	218
/archive/tools/test/ltp-full-20031002-ocera.tgz	164
/archive/ctu/public/components/canmon/canmon-0.99.tgz	163
/archive/upvlc/public/components/appsched/appsched-0.2-1.tgz	163
/archive/upvlc/public/components/pmqueue/pmqueue-0.2-1.tgz	155
/archive/upvlc/public/components/rtlgnat/rtlgnat-1.0.tgz	148
/archive/sssa/public/components/pcomp/pcomp-1.0-1.tgz	143
/archive/upvlc/public/components/sa-rtl/sa-rtl-2.0.tgz	142
/archive/ctu/public/components/canvca/canvca-0.90.tgz	137
/archive/ctu/public/components/ethdev/ethdev-0.1.tgz	129
/archive/upvlc/public/components/ptimers/ptimers-0.2-1.tgz	125
/archive/upvlc/public/components/ptrace/ptrace-1.0-1.tgz	119
/archive/ctu/public/components/ethdev/ethdev-0.2.2.tgz	117
/archive/ctu/public/components/lincan/lincan-0.1.tgz	116
/archive/sssa/public/components/qmgr/qmgr-1.0-1.tgz	115
/archive/sssa/public/components/qlib/qlib-1.0-1.tgz	112
/archive/upvlc/public/components/rtlcbs/rtlcbs-0.1-1.tgz	111
/archive/upvlc/public/components/psignals/psignals-0.2-1.tgz	110
/archive/sssa/public/components/qres/qres-1.0-1.tgz	102
/archive/ctu/public/components/canvca/canvca-0.01.tgz	100
/archive/upvlc/public/components/dynmem/dynmem-0.70-1.tgz	99
/archive/sssa/public/components/gensched/gensched-1.0-1.tgz	90
/archive/ctu/public/components/canmon/canmon-0.01.tgz	85

It has to be taken into account that some of these packages appear more than once, but with different version numbers.

3.4. OCERA in Google

One important indicator is the visibility of the project through the Google motor. Several search strings have been searched in Google in order to look the position to any OCERA reference. Next table shows some of the results of the search using general or specific strings.

Search Pattern	Position	Number of references
Open Components	1	**17000000**
Open Real-Time Components	1	**2620000**
Embedded Real-time Applications	1	**3220000**
Resource Management components	1	**6610000**
Real-Time Scheduling components	1	**719000**
Fault-Tolerance components	1	**424000**
Real-Time Communication components	1	**2260000**
Embedded RTLinux Applications	3	**14200**
Real-Time components for embedded systems	1	**1430000**
POSIX Timers	2	**55700**
POSIX Signals	2	**156000**
POSIX Barriers	1	**16000**
POSIX Message Queues	2	**64100**
Real-Time Memory Allocator	1	**24800**
CANOpen device	1	**35300**
RT Ethernet	1	**261000**
CBS Scheduler	1	**12200**
Application Defined Scheduler	1	**310000**
Linux CAN driver	4	**5840000**

Date of this information: 22/02/2005

3.5. OCERA results in external websites

Some of the OCERA project results has been also published in other developers websites. This section presents a brief summary of access statistics in such external websites.

The Universidad Politecnica de Valencia maintains another website, “RTPortal”, that is devoted to RTLinux developments. In this website, some of the components developed in the OCERA project have been also made available. Some of this components are: EDF + SRP scheduler, POSIX Trace, POSIX Signals, POSIX Timer, RTL-Linux wait queues, Ada for RTLinux, Stand-Alone RTLinux, RTLide + RTLfs and the TLSF allocator.

The following table shows information about some of this components in the RTPortal web-site.

Component	Hits
Ada for RTLinux	200
TLSF Memory Allocator	155
POSIX Timers	54
EDF + SRP scheduler	37
POSIX Signals	34
RTL ide + fs	26
RTLinux Stand-Alone	25

Some of the communication components has also been offered through the “freshmeat.net” web site (http://freshmeat.net/projects/lincan). Linux CAN driver has gained some popularity since its publication in this website, and there are an increasing list of contributors and interested companies on testing is capabilities. To obtain statistics from this website are quite complicated, because only maintains the very last accesses.

Also there is a list of industry who have shown interest and have donated hardware to help the development of LinCAN:

- BFAD GmbH & Co.KG http://www.bfad.de/
- PiKRON Ltd.
- Unicontrols a.s. http://www.unicontrols.cz/
- Kvaser AB http://www.kvaser.com/
- Artificial Vision and Intelligent Vision Lab
  Dipartimento di Ingegneria dell'Informazione
  Universita' degli Studi di Parma
  http://vislab.ce.unipr.it/