TECHNOLOGICAL IMPLEMENTATION PLAN

Description of project

EC PROGRAMME:	**IST**
PROJECT TITLE:	Open Components for Embedded Real-time Applications
ACRONYM:	**OCERA**
PROGRAMME TYPE:	5th FWP (Fifth Framework Programme)
CONTRACT NUMBER:	IST-2001-35102
PROJECT WEB SITE (if any):	www.ocera.org
START DATE:	01 Apr 2002
END DATE:	30 Sep 2004
COORDINATOR DETAILS:	**Name:** Alfons Crespo **Organisation:** Universidad Politecnica de Valencia **Address:** Camino Vera 14, 46022 Valencia, Spain **Telephone:** +34 963877576 **E-mail:** alfons@disca.upv.es

PARTNERS NAME:
Visual Tools S.A., Gomez Molinero Paco **Commissariat a l'Energie Atomique,** RUSSOTTO François **Unicontrols, A.S.,** KONDR Pavel **MNIS,** MOREL Pierre **Czech Technical University in Prague,** HANZALEK Zdenek **Scuola Superiore di Studi Universitari e di Perfezionamento Sant'Anna,** LIPARI Giuseppe

Commission Officer Name:	Corinna AMTING

Executive summary

Original research objectives
The OCERA project is targeted at the improvements of embedded distributed systems for applications with real-time constraints. The main objetive is to create a library of free software components for the design of embedded real-time systems, targeted both to the industrial and to the academic world. The open-source and free development model shall be applied to a real-time embeddable kernel in the form of open source components and features which are innovative in scheduling, resource management, communications and fault-tolerance. The development of a comprehensive software architecture based on a high performance distributed real-time Operating System will be portable, flexible and configurable. Demonstrator systems in the areas of process control and multimedia will be chosen to validate the components and show their flexibility to a large domain of applications.
Objectives: The main objective is the design and implementation of a library of free software components for the design of embedded real-time systems. These components will be used to create flexible (new scheduling will support a wide variety of applications),

configurable(scalable from a small to a fully featured system), robust (fault-tolerant and high performance) and portable (adaptable to several hw/sw configurations). The OCERA components will provide Linux with the new real-time functionalities and will permit embedded system developers to access all these benefits. The project shall transfer to the industrial world an innovative real-time technology, which leans on scientific results recognized and validated in a formal way. The components will be designed to cover the widest application range including fully critical systems, and systems with different critically degrees. Work description: The OCERA project is defined around 12 workpackages covering 5 activities. As the project aims at delivering software to the industry, its results will be checked against the real needs thanks to the contribution in the first activity of analysis and specification: the analysis of the state of the art (WP1) in conjunction with the market analysis results (WP3) will allow to define functionalities and kinds of embedded systems which will make possible the definition of the hardware and software requirements (WP2). From these requirements, the development activity is concentrated in the design and implementation of the appropriate real-time methods and techniques in the field of resource management (WP4), scheduling (WP5), fault-tolerance (WP6) and communications (WP7). The assessment of project results is organized in a third activity around the integration (WP8) and the evaluation in real world applications (WP9). The project aims at reaching rapid quality software production. It implies extensive testing, verification and validation, performance evaluation and competition analysis. To fulfil these requirements, the development has been structured in two phases. The first phase provides basic mechanisms and the second phase completes the functionalities. As soon as the first step of development is achieved, the integration phase can start in workpackage WP8. This permits immediate exploitation of results - at mid-term of the project one version of Real-time Linux supplied with a minimum set of functionalities will be made available. The management and dissemination will permit the partners interaction and it will be carried out through periodic meetings, electronic mail, and the web site support. These activities are performed in WP11 and WP12. Milestones: The expected outcome of the OCERA project is the implementation of a comprehensive software architecture based on a high-performance distributed real-time operating system. A library of free software components for the design of a high variety of embedded real-time systems to cover several classes of applications configures the basis of this architecture. The project will provide case study, training documentation, details of the demonstrators and the software components through a web site. The milestones are as follows: M1 (month 6): market analysis and architecture specification available; M2 (month 12): platform analysis done and first OCERA components prototypes available; M3 (month 18): new functionalities defined and first step of component integration achieved; M4 (month 27): final version of components implemented and second step of integration achieved; M5 (month 30): Validation done and technical support/training material available.

Expected deliverables

Project's actual outcome

Broad dissemination and use intentions for the expected outputs

Overview of all your main project results

No.	Self-descriptive title of the result	Category A, B or C*	Partner(s) owning the result(s) (referring in particular to specific patents, copyrights, etc.) & involved in their further use
1	Ada porting to RTLinux	A	Universidad Politecnica de Valencia
2	UniCAP porting to Linux+RTLinux	A	Unicontrols, A.S.
3	A resource reservation scheduler for Linux	A	Scuola Superiore di Studi Universitari e di Perfezionamento Sant'Anna
4	A feedback scheduling mechanism for QoS control in Linux	A	Scuola Superiore di Studi Universitari e di Perfezionamento Sant'Anna

5	Support: SourceForge CVS and Bug Tracking	A	MNIS
6	OCERA Programmer's Guide	A	Visual Tools S.A. Commissariat a l'Energie Atomique Unicontrols, A.S. MNIS Czech Technical University in Prague Universidad Politecnica de Valencia Scuola Superiore di Studi Universitari e di Perfezionamento Sant'Anna
7	OCERA User's Guide	A	Visual Tools S.A. Commissariat a l'Energie Atomique Unicontrols, A.S. MNIS Czech Technical University in Prague Universidad Politecnica de Valencia Scuola Superiore di Studi Universitari e di Perfezionamento Sant'Anna
8	OCERA Development CDROM	A	MNIS
9	Onetd: RTLinux to Linux Socket interface	A	MNIS
10	XtratuM: a nano kernel for multi-operating systems support	A	Universidad Politecnica de Valencia
11	Java Porting to RTLINUX	A	Universidad Politecnica de Valencia
12	TLSF: a dynamic memory allocator for real-time systems	A	Universidad Politecnica de Valencia
13	Lightweight POSIX Trace (Lptrace)	A	Universidad Politecnica de Valencia
14	OCERA System Metrics (Metrics)	A	Universidad Politecnica de Valencia
15	RtIIDE a IDE Device Driver	A	Universidad Politecnica de Valencia
16	rtlFS A file system for RTLinux	A	Universidad Politecnica de Valencia
17	SaRtl Stand alone OCERA RtLinux	A	Universidad Politecnica de Valencia
18	ORTE - open source implementation of Real-Time Publish-Subscribe middleware	A	Czech Technical University in Prague
19	LinCAN - Portable CAN driver	A	Czech Technical University in Prague
20	Open source implementation of CANopen protocol	A	Czech Technical University in Prague
21	Verification of distributed applications by timed automata	A	Czech Technical University in Prague
22	Mobile Video Viewer application for the digital video recording systemsof the company to work on PDA units for patrolling guards	A	Visual Tools S.A.

23	Embedded digital video recorder with people counting capabilities based in the Strong-ARM processor (XScale)	A	Visual Tools S.A.

*A: results usable outside the consortium / B: results usable within the consortium / C: non usable results

Quantified Data on the dissemination and use of the project results

Items about the dissemination and use of the project results (consolidated numbers)	Currently achieved quantity	Estimated future* quantity
Product innovations		
Process innovations		
New services (commercial)		
New services (public)		
New methods		
Scientific breakthrought		
Technical standards to which this project has contributed		
EU regulations/directives to which this project has contributed		
International regulations to which this project has contributed		
PhDs generated by the project		
Grantees/trainees including transnational exchange of personnel		

** "Future" means expectations within the next 3 years following the end of the project*

Comment on European Interest

Community added value and contribution to EU policies

European dimension of the problem

Contribution to developing S&T co-operation at international level. European added value

Contribution to policy design or implementation

Contribution to Community social objectives

Improving the quality of life in the Community:

Provision of appropriate incentives for monitoring and creating jobs in the Community (including use and development of skills):

Supporting sustainable development, preserving and/or enhancing the environment (including use/conservation of resources):

Expected project impact (to be filled in by the project coordinator)

EU Policy Goals	I SCALE OF EXPECTED IMPACT OVER THE NEXT 10 YEARS -1 0 1 2 3	II other	
		Not applicable to project	Project Impacttoo difficult to estimate
1. Improved sustainable economic development and growth, competitiveness	0	v	
2. Improved employment	0	v	

3. Improved quality of life and health and safety	0	v	
4. Improved education	0	v	
5. Improved preservation and enhancement of the environment	0	v	
6. Improved scientific and technological quality	2		
7. Regulatory and legislative environment	0	v	
8. Other	0	v	

1. Economic development and growth, competitiveness	**Scale of Expected Impacts over the next 10 years (2)**	
	By Project End -1 0 1 2 3	**After Project End** -1 0 1 2 3
a) Increased Turnover for project participants - national markets		
b) Increased Turnover for project participants - international markets		
c) Increased Productivity for project participants		
d) Reduced costs for project participants		
e) Improved output quality/high technology content		

2. Employment	**Scale of Expected Impacts over the next 10 years (2)**	
	By Project End -1 0 1 2 3	**After Project End** -1 0 1 2 3
a) Safeguarding of jobs		
b) Net employment growth in projects participants staff		
c) Net employment growth in customer and supply chains		
d) Net employment growth in the European economy at large		

3. Quality of Life and health and safety	**Scale of Expected Impacts over the next 10 years (2)**	
	By Project End -1 0 1 2 3	**After Project End** -1 0 1 2 3
a) Improved health care		
b) Improved food, nutrition		
c) Improved safety (incl. consumers and workers safety)		
d) Improved quality of life for the elderly and disabled		
e) Improved life expectancy		
f) Improved working conditions		
g) Improved child care		
h) Improved mobility of persons		

4. Improved education	**Scale of Expected Impacts over**

	the next 10 years (2)	
	By Project End -1 0 1 2 3	After Project End -1 0 1 2 3
a) Improved learning processes including lifelong learning		
b) Development of new university curricula		

5. Preservation and enhancement of the environment	Scale of Expected Impacts over the next 10 years (2)	
	By Project End -1 0 1 2 3	After Project End -1 0 1 2 3
a) Improved prevention of emissions		
b) Improved treatment of emissions		
c) Improved preservation of natural resources and cultural heritage		
d) Reduced energy consumption		

6. S&T quality	Scale of Expected Impacts over the next 10 years (2)	
	By Project End -1 0 1 2 3	After Project End -1 0 1 2 3
a) Production of new knowledge	2	3
b) Safeguarding or development of expertise in a research area	1	2
c) Acceleration of RTD, transfer or uptake	2	3
d) Enhance skills of RTD staff	0	0
e) Transfer expertise/know-how/technology	2	2
f) Improved access to knowledge-based networks	1	1
g) Identifying appropriate partners and expertise	1	1
h) Develop international S&T co-operation	0	0
i) Increased gender equality	0	0

7. Regulatory and legislative environment	Scale of Expected Impacts over the next 10 years (2)	
	By Project End -1 0 1 2 3	After Project End -1 0 1 2 3
a) Contribution to EU policy formulation		
Contribution to EU policy implementation		

8. Other (please specify)	Scale of Expected Impacts over the next 10 years (2)	
	By Project End -1 0 1 2 3	After Project End -1 0 1 2 3

Description of Results

No.	Title
1	Ada porting to RTLinux

CONTACT PERSON FOR THIS RESULT

Name	
Position	
Organisation	
Address	,
Telephone	
Fax	
E-mail	
URL	
Specific Result URL	

SUMMARY

SUBJECT DESCRIPTORS CODES

DOCUMENTATION AND INFORMATION ON THE RESULT

Documentation type	Details (Title, ref. number, general description, language)	Status: PU=Public CO=Confidential

INTELLECTUAL PROPERTY RIGHTS

Type of IPR	KNOWLEDGE: Tick a box and give the corresponding details(reference numbers, etc) if appropriate					Pre-existing know-how Tick a box and give the corresponding details(reference numbers, etc) if appropriate	
	Current				Foreseen	Tick	Details
	Tick	NoP[1)]	NoI[2)]	Details	Tick		
Patent applied for							
Patent granted							
Patent search carried out							
Registered design							
Trademark applications							
Copyrights							

Secret know-how						
Other - please specify:						

1) Number of **P**riority (national) applications/patents
2) Number of **I**nternationally extended applications/patents

MARKET APPLICATION SECTORS

Market application sectors

CURRENT STAGE OF DEVELOPMENT

Current stage of development	
Other:	

Quantified data about the result

Items (about the results)	**Actual current quantity**	**Estimated (or future) quantity**
Time to application / market (in months from the end of the research project)		
Number of (public or private) entities potentially involved in the implementation of the result:		
of which: number of SMEs:		
of which: number of entities in third countries (outside EU):		
Targeted user audience: of reachable people		
S&T publications (referenced publications only)		
publications addressing general public (e.g. CD-ROMs, WEB sites)		
publications addressing decision takers / public authorities / etc.		
Visibility for the general public	YES	

Further collaboration, dissemination and use of the result

COLLABORATIONS SOUGHT

R&D	Further research or development		**FIN**	Financial support	
LIC	Licence agreement		**VC**	Venture capital/spin-off funding	
MAN	Manufacturing agreement		**PPP**	Private-public partnership	
MKT	Marketing agreement		**INFO**	Information exchange/training	
JV	Establish a joint enterprise or partnership		**CONS**	Available for consultancy	
Other	(please specify)				
Details:					

POTENTIAL OFFERED FOR FURTHER DISSEMINATION AND USE

PROFILE OF ADDITIONAL PARTNER(S) FOR FURTHER DISSEMINATION AND USE

No.	Title
2	UniCAP porting to Linux+RTLinux

CONTACT PERSON FOR THIS RESULT

Name	Ivan Bartunek
Position	head of division
Organisation	UniControls a.s.
Address	Krenicka 2257 10000, Praha Czech republic
Telephone	+420 272 011 425
Fax	+420 272 011 403
E-mail	Bartunek@unicontrols.cz
URL	www.unicontrols.cz
Specific Result URL	

SUMMARY

UniCAP is a complex software tool for support of designing and application programming of distributed information and control systems. It consists of two main parts: 1. Development environment for application programming. Application programmer can use a graphic editor for design an application in FBD or SFC languages. 2. Real-time environment in target process control stations. Control algorithms of process control applications are compiled, downloaded into process control stations (nodes of a distributed system) and executed in an environment of a real-time operating system. This part of UniCAP was ported in frame of OCERA project from OS9 operating system to Linux+RTLinux operating system.

SUBJECT DESCRIPTORS CODES

DOCUMENTATION AND INFORMATION ON THE RESULT

Documentation type	Details (Title, ref. number, general description, language)	Status: PU=Public CO=Confidential
References	UniCAP was used as a design tool and as a real-time application in target process control stations in following applications: 1.The high-pressure Gas Turbocompressor Plant Kralice, size of distributed system: 6 nodes, location: the Czech Republic, South Moravia 2.The high-pressure Gas Turbocompressor Plant Kourim, size of distributed system: 6 nodes, location: the Czech Republic, Central Bohemia 3.The high-pressure Gas Compressor Plant Jablonov, size of distributed system: 14 nodes, location: Slovakia 4.Underground Gas Storage Tvrdonice, size of distributed system: 73 nodes, location: the Czech Republic, South Moravia	Public

INTELLECTUAL PROPERTY RIGHTS

Type of IPR	KNOWLEDGE: Tick a box and give the corresponding details(reference numbers, etc) if appropriate		Pre-existing know-how Tick a box and give the corresponding details(reference numbers, etc) if appropriate	
	Current	Foreseen	Tick	Details

	Tick	NoP[1)]	NoI[2)]	Details	Tick		
Patent applied for							
Patent granted							
Patent search carried out							
Registered design							
Trademark applications							
Copyrights							
Secret know-how							
Other - please specify:							

1) Number of **P**riority (national) applications/patents
2) Number of **I**nternationally extended applications/patents

MARKET APPLICATION SECTORS

Market application sectors
35.2 Manufacture of railway and tramway locomotives and rolling stock 35.3 Manufacture of aircraft and spacecraft 40 Electricity, gas, steam and hot water supply

CURRENT STAGE OF DEVELOPMENT

Current stage of development	Results of demonstration trials available
Other:	

Quantified data about the result

Items (about the results)	Actual current quantity	Estimated (or future) quantity
Time to application / market (in months from the end of the research project)		0
Number of (public or private) entities potentially involved in the implementation of the result:		
of which: number of SMEs:		
of which: number of entities in third countries (outside EU):		
Targeted user audience: of reachable people		100
S&T publications (referenced publications only)		1
publications addressing general public (e.g. CD-ROMs, WEB sites)		
publications addressing decision takers / public authorities / etc.		1
Visibility for the general public	YES	

Further collaboration, dissemination and use of the result

COLLABORATIONS SOUGHT

R&D	Further research or development		**FIN**	Financial support	
LIC	Licence agreement		**VC**	Venture capital/spin-off funding	

MAN	Manufacturing agreement		**PPP**	Private-public partnership	
MKT	Marketing agreement		**INFO**	Information exchange/training	
JV	Establish a joint enterprise or partnership		**CONS**	Available for consultancy	
Other	(please specify)				
Details:					

POTENTIAL OFFERED FOR FURTHER DISSEMINATION AND USE

PROFILE OF ADDITIONAL PARTNER(S) FOR FURTHER DISSEMINATION AND USE

No.	Title
3	A resource reservation scheduler for Linux

CONTACT PERSON FOR THIS RESULT

Name	Giuseppe Lipari
Position	Researcher
Organisation	Scuola Superiore di Studi Universitari e di Perfezionamento Sant'Anna
Address	Piazza Martiri della Liberta, 33 56124, Pisa Italy
Telephone	+39 050 883450
Fax	+39 050 883452
E-mail	lipari@sssup.it
URL	http://www.sssup.it
Specific Result URL	

SUMMARY

The result consists in a software component of the Linux kernel that adds new functionalities to the standard Linux scheduler. Here follows a description of the functionalities along with its potential benefits. a) Temporal protection between software processes. Standard OS provide memory protection as a mean of insulating the behaviour of each process from the interference of the others. However, it can happen that a malicious or simply mesbehaving process uses all the computation resources of a computer system, producing the well-known Denial of Service (DoS) problem. Our scheduler provides the temporal protection property: each process is assigned a fraction of the processor, and it cannot execute for more. In this way, debugging is facilitated, since it is always possible to reserve a small fraction of the processor to a terminal in order to control the behavious of the system even under heavy overload conditions. Moreover, real-time system can take advantage of the temporal protection, because they will be guaranteed a certain fraction of the processor even if non-real-time applications are executing in the system. The functionality is completely transparent to the application, and there is no need to modify the application code. This result can be applied to all computing systems in which it is necessary to keep under control overload conditions and the quality of service of the running processes. By using a web interface, the user/developer of an application can adjust the allocation of the resources while the application is running, in order to find the best configuration. Potential user of this technology are: - Developers of servers (video servers, web servers, etc.) - Developers or users of use soft real-time applications on Linux b) Power saving. Most processors nowdays provide a way of changing the operating voltage and frequency, in order to reduce power consumption. However, this change must be carefully done in order to guarantee real-time execution and quality of service to the software processes. Our scheduler automatically adjust the processor speed to the needs of the real-time processes, achiving significant power savings (up to 40%-50%) without sacrificing quality of services. Experiments with a MPEG player (Xine) show the advantage of using our scheduler with respect to the standard Linux scheduler. Potential users of this technology are: - OS vendors that want to apply the same technology to their OS. - Developers of applications running on battery powered palmtops or embedded systems, based on Linux, that may want to extend the lifetime of the system without compromising the provided quality of service. The status of the software component is stable. Software demos are available for evaluating the technology. The component is distributed with an Open Source license (the GPL), but separate agreements are possible for different licenses.

SUBJECT DESCRIPTORS CODES

129 COMPUTER SCIENCE/ENGINEERING, NUMERICAL ANALYSIS, SYSTEMS, CONTROL
321 INFORMATION TECHNOLOGY/SCIENCE
579 SOFTWARE ENGINEERING, MIDDLEWARE, GROUPWARE

DOCUMENTATION AND INFORMATION ON THE RESULT

Documentation type	Details (Title, ref. number, general description, language)	Status: PU=Public CO=Confidential

INTELLECTUAL PROPERTY RIGHTS

Type of IPR	KNOWLEDGE: Tick a box and give the corresponding details(reference numbers, etc) if appropriate					Pre-existing know-how Tick a box and give the corresponding details(reference numbers, etc) if appropriate	
	Current				Foreseen	Tick	Details
	Tick	NoP[1)]	NoI[2)]	Details	Tick		
Patent applied for							
Patent granted							
Patent search carried out							
Registered design							
Trademark applications							
Copyrights							
Secret know-how							
Other - please specify:							

1) Number of **P**riority (national) applications/patents
2) Number of **I**nternationally extended applications/patents

MARKET APPLICATION SECTORS

Market application sectors
72 Computer and related activities

CURRENT STAGE OF DEVELOPMENT

Current stage of development	Results of demonstration trials available
Other:	

Quantified data about the result

Items (about the results)	Actual current quantity	Estimated (or future) quantity
Time to application / market (in months from the end of the research project)	4	
Number of (public or private) entities potentially involved in the implementation of the result:	2	4
of which: number of SMEs:	2	3
of which: number of entities in third countries (outside EU):		
Targeted user audience: of reachable people		

S&T publications (referenced publications only)	8	9
publications addressing general public (e.g. CD-ROMs, WEB sites)		
publications addressing decision takers / public authorities / etc.		
Visibility for the general public	YES	

Further collaboration, dissemination and use of the result

COLLABORATIONS SOUGHT

R&D	Further research or development	**v**	**FIN**	Financial support	
LIC	Licence agreement		**VC**	Venture capital/spin-off funding	
MAN	Manufacturing agreement		**PPP**	Private-public partnership	**v**
MKT	Marketing agreement		**INFO**	Information exchange/training	
JV	Establish a joint enterprise or partnership		**CONS**	Available for consultancy	**v**
Other	(please specify)				
Details:	We are looking for software companies interested in applying the technology to their products. In particular: - OS vendors could be interested to exploit the technology in their proprietary operating system. In which case, we are available for further research and development, and for consultancy. - Software companies working on Linux that could be interested in using the library in their product. In this case, we are available for consultancy.				

POTENTIAL OFFERED FOR FURTHER DISSEMINATION AND USE

PROFILE OF ADDITIONAL PARTNER(S) FOR FURTHER DISSEMINATION AND USE

No.	Title
4	A feedback scheduling mechanism for QoS control in Linux

CONTACT PERSON FOR THIS RESULT

Name	
Position	
Organisation	
Address	,
Telephone	
Fax	
E-mail	
URL	
Specific Result URL	

SUMMARY

SUBJECT DESCRIPTORS CODES

DOCUMENTATION AND INFORMATION ON THE RESULT

Documentation type	Details (Title, ref. number, general description, language)	Status: PU=Public CO=Confidential

INTELLECTUAL PROPERTY RIGHTS

Type of IPR	KNOWLEDGE: Tick a box and give the corresponding details(reference numbers, etc) if appropriate					Pre-existing know-how Tick a box and give the corresponding details(reference numbers, etc) if appropriate	
	Current				Foreseen	Tick	Details
	Tick	NoP[1)]	NoI[2)]	Details	Tick		
Patent applied for							
Patent granted							
Patent search carried out							
Registered design							
Trademark applications							
Copyrights							
Secret know-how							
Other - please specify:							

1) Number of **P**riority (national) applications/patents
2) Number of **I**nternationally extended applications/patents

MARKET APPLICATION SECTORS

Market application sectors

CURRENT STAGE OF DEVELOPMENT

Current stage of development	
Other:	

Quantified data about the result

Items (about the results)	Actual current quantity	Estimated (or future) quantity
Time to application / market (in months from the end of the research project)		
Number of (public or private) entities potentially involved in the implementation of the result:		
of which: number of SMEs:		
of which: number of entities in third countries (outside EU):		
Targeted user audience: of reachable people		
S&T publications (referenced publications only)		
publications addressing general public (e.g. CD-ROMs, WEB sites)		
publications addressing decision takers / public authorities / etc.		
Visibility for the general public	YES	

Further collaboration, dissemination and use of the result

COLLABORATIONS SOUGHT

R&D	Further research or development		**FIN**	Financial support	
LIC	Licence agreement		**VC**	Venture capital/spin-off funding	
MAN	Manufacturing agreement		**PPP**	Private-public partnership	
MKT	Marketing agreement		**INFO**	Information exchange/training	
JV	Establish a joint enterprise or partnership		**CONS**	Available for consultancy	
Other	(please specify)				
Details:					

POTENTIAL OFFERED FOR FURTHER DISSEMINATION AND USE

PROFILE OF ADDITIONAL PARTNER(S) FOR FURTHER DISSEMINATION AND USE

No.	Title
5	Support: SourceForge CVS and Bug Tracking

CONTACT PERSON FOR THIS RESULT

Name	
Position	
Organisation	
Address	,
Telephone	
Fax	
E-mail	
URL	
Specific Result URL	

SUMMARY

SUBJECT DESCRIPTORS CODES

DOCUMENTATION AND INFORMATION ON THE RESULT

Documentation type	Details (Title, ref. number, general description, language)	Status: PU=Public CO=Confidential

INTELLECTUAL PROPERTY RIGHTS

Type of IPR	KNOWLEDGE: Tick a box and give the corresponding details(reference numbers, etc) if appropriate					Pre-existing know-how Tick a box and give the corresponding details(reference numbers, etc) if appropriate	
	Current				Foreseen	Tick	Details
	Tick	NoP[1)]	NoI[2)]	Details	Tick		
Patent applied for							
Patent granted							
Patent search carried out							
Registered design							
Trademark applications							
Copyrights							
Secret know-how							
Other - please specify:							

1) Number of **P**riority (national) applications/patents
2) Number of **I**nternationally extended applications/patents

MARKET APPLICATION SECTORS

Market application sectors

CURRENT STAGE OF DEVELOPMENT

Current stage of development	
Other:	

Quantified data about the result

Items (about the results)	Actual current quantity	Estimated (or future) quantity
Time to application / market (in months from the end of the research project)		
Number of (public or private) entities potentially involved in the implementation of the result:		
of which: number of SMEs:		
of which: number of entities in third countries (outside EU):		
Targeted user audience: of reachable people		
S&T publications (referenced publications only)		
publications addressing general public (e.g. CD-ROMs, WEB sites)		
publications addressing decision takers / public authorities / etc.		
Visibility for the general public	YES	

Further collaboration, dissemination and use of the result

COLLABORATIONS SOUGHT

R&D	Further research or development		**FIN**	Financial support	
LIC	Licence agreement		**VC**	Venture capital/spin-off funding	
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JV	Establish a joint enterprise or partnership		**CONS**	Available for consultancy	
Other	(please specify)				
Details:					

POTENTIAL OFFERED FOR FURTHER DISSEMINATION AND USE

PROFILE OF ADDITIONAL PARTNER(S) FOR FURTHER DISSEMINATION AND USE

No.	Title
6	OCERA Programmer's Guide

CONTACT PERSON FOR THIS RESULT

Name	
Position	
Organisation	
Address	,
Telephone	
Fax	
E-mail	
URL	
Specific Result URL	

SUMMARY

SUBJECT DESCRIPTORS CODES

DOCUMENTATION AND INFORMATION ON THE RESULT

Documentation type	Details (Title, ref. number, general description, language)	Status: PU=Public CO=Confidential

INTELLECTUAL PROPERTY RIGHTS

Type of IPR	KNOWLEDGE: Tick a box and give the corresponding details(reference numbers, etc) if appropriate					Pre-existing know-how Tick a box and give the corresponding details(reference numbers, etc) if appropriate	
	Current				Foreseen	Tick	Details
	Tick	NoP[1)]	NoI[2)]	Details	Tick		
Patent applied for							
Patent granted							
Patent search carried out							
Registered design							
Trademark applications							
Copyrights							
Secret know-how							
Other - please specify:							

1) Number of **P**riority (national) applications/patents
2) Number of **I**nternationally extended applications/patents

MARKET APPLICATION SECTORS

Market application sectors

CURRENT STAGE OF DEVELOPMENT

Current stage of development	
Other:	

Quantified data about the result

Items (about the results)	Actual current quantity	Estimated (or future) quantity
Time to application / market (in months from the end of the research project)		
Number of (public or private) entities potentially involved in the implementation of the result:		
of which: number of SMEs:		
of which: number of entities in third countries (outside EU):		
Targeted user audience: of reachable people		
S&T publications (referenced publications only)		
publications addressing general public (e.g. CD-ROMs, WEB sites)		
publications addressing decision takers / public authorities / etc.		
Visibility for the general public	YES	

Further collaboration, dissemination and use of the result

COLLABORATIONS SOUGHT

R&D	Further research or development		FIN	Financial support	
LIC	Licence agreement		VC	Venture capital/spin-off funding	
MAN	Manufacturing agreement		PPP	Private-public partnership	
MKT	Marketing agreement		INFO	Information exchange/training	
JV	Establish a joint enterprise or partnership		CONS	Available for consultancy	
Other	(please specify)				
Details:					

POTENTIAL OFFERED FOR FURTHER DISSEMINATION AND USE

PROFILE OF ADDITIONAL PARTNER(S) FOR FURTHER DISSEMINATION AND USE

No.	Title
7	OCERA User's Guide

CONTACT PERSON FOR THIS RESULT

Name	
Position	
Organisation	
Address	,
Telephone	
Fax	
E-mail	
URL	
Specific Result URL	

SUMMARY

SUBJECT DESCRIPTORS CODES

DOCUMENTATION AND INFORMATION ON THE RESULT

Documentation type	Details (Title, ref. number, general description, language)	Status: PU=Public CO=Confidential

INTELLECTUAL PROPERTY RIGHTS

Type of IPR	KNOWLEDGE: Tick a box and give the corresponding details(reference numbers, etc) if appropriate					Pre-existing know-how Tick a box and give the corresponding details(reference numbers, etc) if appropriate	
	Current				Foreseen	Tick	Details
	Tick	NoP[1)]	NoI[2)]	Details	Tick		
Patent applied for							
Patent granted							
Patent search carried out							
Registered design							
Trademark applications							
Copyrights							
Secret know-how							
Other - please specify:							

1) Number of **P**riority (national) applications/patents
2) Number of **I**nternationally extended applications/patents

MARKET APPLICATION SECTORS

Market application sectors

CURRENT STAGE OF DEVELOPMENT

Current stage of development	
Other:	

Quantified data about the result

Items (about the results)	Actual current quantity	Estimated (or future) quantity
Time to application / market (in months from the end of the research project)		
Number of (public or private) entities potentially involved in the implementation of the result:		
of which: number of SMEs:		
of which: number of entities in third countries (outside EU):		
Targeted user audience: of reachable people		
S&T publications (referenced publications only)		
publications addressing general public (e.g. CD-ROMs, WEB sites)		
publications addressing decision takers / public authorities / etc.		
Visibility for the general public	YES	

Further collaboration, dissemination and use of the result

COLLABORATIONS SOUGHT

R&D	Further research or development		**FIN**	Financial support	
LIC	Licence agreement		**VC**	Venture capital/spin-off funding	
MAN	Manufacturing agreement		**PPP**	Private-public partnership	
MKT	Marketing agreement		**INFO**	Information exchange/training	
JV	Establish a joint enterprise or partnership		**CONS**	Available for consultancy	
Other	(please specify)				
Details:					

POTENTIAL OFFERED FOR FURTHER DISSEMINATION AND USE

PROFILE OF ADDITIONAL PARTNER(S) FOR FURTHER DISSEMINATION AND USE

No.	Title
8	OCERA Development CDROM

CONTACT PERSON FOR THIS RESULT

Name	
Position	
Organisation	
Address	,
Telephone	
Fax	
E-mail	
URL	
Specific Result URL	

SUMMARY

SUBJECT DESCRIPTORS CODES

DOCUMENTATION AND INFORMATION ON THE RESULT

Documentation type	Details (Title, ref. number, general description, language)	Status: PU=Public CO=Confidential

INTELLECTUAL PROPERTY RIGHTS

Type of IPR	KNOWLEDGE: Tick a box and give the corresponding details(reference numbers, etc) if appropriate					Pre-existing know-how Tick a box and give the corresponding details(reference numbers, etc) if appropriate	
	Current				Foreseen	Tick	Details
	Tick	NoP[1)]	NoI[2)]	Details	Tick		
Patent applied for							
Patent granted							
Patent search carried out							
Registered design							
Trademark applications							
Copyrights							
Secret know-how							
Other - please specify:							

1) Number of **P**riority (national) applications/patents
2) Number of **I**nternationally extended applications/patents

MARKET APPLICATION SECTORS

Market application sectors

CURRENT STAGE OF DEVELOPMENT

Current stage of development	
Other:	

Quantified data about the result

Items (about the results)	Actual current quantity	Estimated (or future) quantity
Time to application / market (in months from the end of the research project)		
Number of (public or private) entities potentially involved in the implementation of the result:		
of which: number of SMEs:		
of which: number of entities in third countries (outside EU):		
Targeted user audience: of reachable people		
S&T publications (referenced publications only)		
publications addressing general public (e.g. CD-ROMs, WEB sites)		
publications addressing decision takers / public authorities / etc.		
Visibility for the general public	YES	

Further collaboration, dissemination and use of the result

COLLABORATIONS SOUGHT

R&D	Further research or development		FIN	Financial support	
LIC	Licence agreement		VC	Venture capital/spin-off funding	
MAN	Manufacturing agreement		PPP	Private-public partnership	
MKT	Marketing agreement		INFO	Information exchange/training	
JV	Establish a joint enterprise or partnership		CONS	Available for consultancy	
Other	(please specify)				
Details:					

POTENTIAL OFFERED FOR FURTHER DISSEMINATION AND USE

PROFILE OF ADDITIONAL PARTNER(S) FOR FURTHER DISSEMINATION AND USE

No.	Title
9	Onetd: RTLinux to Linux Socket interface

CONTACT PERSON FOR THIS RESULT

Name	
Position	
Organisation	
Address	,
Telephone	
Fax	
E-mail	
URL	
Specific Result URL	

SUMMARY

SUBJECT DESCRIPTORS CODES

DOCUMENTATION AND INFORMATION ON THE RESULT

Documentation type	Details (Title, ref. number, general description, language)	Status: PU=Public CO=Confidential

INTELLECTUAL PROPERTY RIGHTS

Type of IPR	KNOWLEDGE: Tick a box and give the corresponding details(reference numbers, etc) if appropriate					Pre-existing know-how Tick a box and give the corresponding details(reference numbers, etc) if appropriate	
	Current				Foreseen	Tick	Details
	Tick	NoP[1)]	NoI[2)]	Details	Tick		
Patent applied for							
Patent granted							
Patent search carried out							
Registered design							
Trademark applications							
Copyrights							
Secret know-how							
Other - please specify:							

1) Number of **P**riority (national) applications/patents
2) Number of **I**nternationally extended applications/patents

MARKET APPLICATION SECTORS

Market application sectors

CURRENT STAGE OF DEVELOPMENT

Current stage of development	
Other:	

Quantified data about the result

Items (about the results)	Actual current quantity	Estimated (or future) quantity
Time to application / market (in months from the end of the research project)		
Number of (public or private) entities potentially involved in the implementation of the result:		
of which: number of SMEs:		
of which: number of entities in third countries (outside EU):		
Targeted user audience: of reachable people		
S&T publications (referenced publications only)		
publications addressing general public (e.g. CD-ROMs, WEB sites)		
publications addressing decision takers / public authorities / etc.		
Visibility for the general public	YES	

Further collaboration, dissemination and use of the result

COLLABORATIONS SOUGHT

R&D	Further research or development		FIN	Financial support	
LIC	Licence agreement		VC	Venture capital/spin-off funding	
MAN	Manufacturing agreement		PPP	Private-public partnership	
MKT	Marketing agreement		INFO	Information exchange/training	
JV	Establish a joint enterprise or partnership		CONS	Available for consultancy	
Other	(please specify)				
Details:					

POTENTIAL OFFERED FOR FURTHER DISSEMINATION AND USE

PROFILE OF ADDITIONAL PARTNER(S) FOR FURTHER DISSEMINATION AND USE

No.	Title
10	XtratuM: a nano kernel for multi-operating systems support

CONTACT PERSON FOR THIS RESULT

Name	
Position	
Organisation	
Address	,
Telephone	
Fax	
E-mail	
URL	
Specific Result URL	

SUMMARY

SUBJECT DESCRIPTORS CODES

DOCUMENTATION AND INFORMATION ON THE RESULT

Documentation type	Details (Title, ref. number, general description, language)	Status: PU=Public CO=Confidential

INTELLECTUAL PROPERTY RIGHTS

Type of IPR	KNOWLEDGE: Tick a box and give the corresponding details(reference numbers, etc) if appropriate					Pre-existing know-how Tick a box and give the corresponding details(reference numbers, etc) if appropriate	
	Current				Foreseen	Tick	Details
	Tick	NoP[1)]	NoI[2)]	Details	Tick		
Patent applied for							
Patent granted							
Patent search carried out							
Registered design							
Trademark applications							
Copyrights							
Secret know-how							
Other - please specify:							

1) Number of **P**riority (national) applications/patents
2) Number of **I**nternationally extended applications/patents

MARKET APPLICATION SECTORS

Market application sectors

CURRENT STAGE OF DEVELOPMENT

Current stage of development	
Other:	

Quantified data about the result

Items (about the results)	Actual current quantity	Estimated (or future) quantity
Time to application / market (in months from the end of the research project)		
Number of (public or private) entities potentially involved in the implementation of the result:		
of which: number of SMEs:		
of which: number of entities in third countries (outside EU):		
Targeted user audience: of reachable people		
S&T publications (referenced publications only)		
publications addressing general public (e.g. CD-ROMs, WEB sites)		
publications addressing decision takers / public authorities / etc.		
Visibility for the general public	YES	

Further collaboration, dissemination and use of the result

COLLABORATIONS SOUGHT

R&D	Further research or development		FIN	Financial support	
LIC	Licence agreement		VC	Venture capital/spin-off funding	
MAN	Manufacturing agreement		PPP	Private-public partnership	
MKT	Marketing agreement		INFO	Information exchange/training	
JV	Establish a joint enterprise or partnership		CONS	Available for consultancy	
Other	(please specify)				
Details:					

POTENTIAL OFFERED FOR FURTHER DISSEMINATION AND USE

PROFILE OF ADDITIONAL PARTNER(S) FOR FURTHER DISSEMINATION AND USE

No.	Title
11	Java Porting to RTLINUX

CONTACT PERSON FOR THIS RESULT

Name	
Position	
Organisation	
Address	,
Telephone	
Fax	
E-mail	
URL	
Specific Result URL	

SUMMARY

SUBJECT DESCRIPTORS CODES

DOCUMENTATION AND INFORMATION ON THE RESULT

Documentation type	Details (Title, ref. number, general description, language)	Status: PU=Public CO=Confidential

INTELLECTUAL PROPERTY RIGHTS

Type of IPR	KNOWLEDGE: Tick a box and give the corresponding details(reference numbers, etc) if appropriate					Pre-existing know-how Tick a box and give the corresponding details(reference numbers, etc) if appropriate	
	Current				Foreseen	Tick	Details
	Tick	NoP[1)]	NoI[2)]	Details	Tick		
Patent applied for							
Patent granted							
Patent search carried out							
Registered design							
Trademark applications							
Copyrights							
Secret know-how							
Other - please specify:							

1) Number of **P**riority (national) applications/patents
2) Number of **I**nternationally extended applications/patents

MARKET APPLICATION SECTORS

Market application sectors

CURRENT STAGE OF DEVELOPMENT

Current stage of development	
Other:	

Quantified data about the result

Items (about the results)	Actual current quantity	Estimated (or future) quantity
Time to application / market (in months from the end of the research project)		
Number of (public or private) entities potentially involved in the implementation of the result:		
of which: number of SMEs:		
of which: number of entities in third countries (outside EU):		
Targeted user audience: of reachable people		
S&T publications (referenced publications only)		
publications addressing general public (e.g. CD-ROMs, WEB sites)		
publications addressing decision takers / public authorities / etc.		
Visibility for the general public	YES	

Further collaboration, dissemination and use of the result

COLLABORATIONS SOUGHT

R&D	Further research or development		**FIN**	Financial support	
LIC	Licence agreement		**VC**	Venture capital/spin-off funding	
MAN	Manufacturing agreement		**PPP**	Private-public partnership	
MKT	Marketing agreement		**INFO**	Information exchange/training	
JV	Establish a joint enterprise or partnership		**CONS**	Available for consultancy	
Other	(please specify)				
Details:					

POTENTIAL OFFERED FOR FURTHER DISSEMINATION AND USE

PROFILE OF ADDITIONAL PARTNER(S) FOR FURTHER DISSEMINATION AND USE

No.	Title
12	TLSF: a dynamic memory allocator for real-time systems

CONTACT PERSON FOR THIS RESULT

Name	Ismael Ripoll
Position	Technical Responsible
Organisation	UNiversidad Politécnica de Valencia
Address	Camino Vers, 14 46022, Valencia Spain
Telephone	
Fax	
E-mail	iripoll@disca.upv.es
URL	
Specific Result URL	http://rtportal.upv.es/rtmalloc/

SUMMARY

TLSF is a new algorithm for dynamic memory allocation that presents a bounded worst-case response time, while keeping the efficiency of the allocation and deallocation operations with a constant temporal cost. The main features of this algorithmare: - Bounded response time. The worst-case execution time (WCET) of a memory allocation and dealloca tion is fixed and can be calculated in advance for a specific platform. - Fast response time. Besides having a bounded response time, the response time is very low. - Small and bounded fragmentation is also achieved by the proposed algorithm. TLSF implements a segregated fit mechanism jointly with bitmaps and a mapping function which speeds-up the search in the set of free lists, in order to achieve a good-fit strategy in bounded time. In addition, the fragmentation problem has higher impact in system performance with long time running applications. A small and bounded fragmentation is also achieved by the proposed algorithm.

SUBJECT DESCRIPTORS CODES

DOCUMENTATION AND INFORMATION ON THE RESULT

Documentation type	Details (Title, ref. number, general description, language)	Status: PU=Public CO=Confidential

INTELLECTUAL PROPERTY RIGHTS

Type of IPR	KNOWLEDGE: Tick a box and give the corresponding details(reference numbers, etc) if appropriate					Pre-existing know-how Tick a box and give the corresponding details(reference numbers, etc) if appropriate	
	Current				Foreseen	Tick	Details
	Tick	NoP[1)]	NoI[2)]	Details	Tick		
Patent applied for							
Patent granted							
Patent search carried out							

Registered design						
Trademark applications						
Copyrights						
Secret know-how						
Other - please specify:						

1) Number of **P**riority (national) applications/patents
2) Number of **I**nternationally extended applications/patents

MARKET APPLICATION SECTORS

Market application sectors
72 Computer and related activities 73 Research and development 80 Education

CURRENT STAGE OF DEVELOPMENT

Current stage of development	
Other:	

Quantified data about the result

Items (about the results)	**Actual current quantity**	**Estimated (or future) quantity**
Time to application / market (in months from the end of the research project)		
Number of (public or private) entities potentially involved in the implementation of the result:		
of which: number of SMEs:		
of which: number of entities in third countries (outside EU):		
Targeted user audience: of reachable people		
S&T publications (referenced publications only)	10	
publications addressing general public (e.g. CD-ROMs, WEB sites)	5	
publications addressing decision takers / public authorities / etc.		
Visibility for the general public	YES	

Further collaboration, dissemination and use of the result

COLLABORATIONS SOUGHT

R&D	Further research or development	**v**	**FIN**	Financial support	
LIC	Licence agreement	**v**	**VC**	Venture capital/spin-off funding	
MAN	Manufacturing agreement		**PPP**	Private-public partnership	
MKT	Marketing agreement		**INFO**	Information exchange/training	
JV	Establish a joint enterprise or partnership		**CONS**	Available for consultancy	
Other	(please specify)				
Details:	Open source component that can be used in different operating systems.				

POTENTIAL OFFERED FOR FURTHER DISSEMINATION AND USE

This is the first real-time allocator available in open source. It can be applied and adapted in different environments specially for embedded systems.

PROFILE OF ADDITIONAL PARTNER(S) FOR FURTHER DISSEMINATION AND USE

No.	Title
13	Lightweight POSIX Trace (Lptrace)

CONTACT PERSON FOR THIS RESULT

Name	
Position	
Organisation	
Address	,
Telephone	
Fax	
E-mail	
URL	
Specific Result URL	

SUMMARY

SUBJECT DESCRIPTORS CODES

DOCUMENTATION AND INFORMATION ON THE RESULT

Documentation type	Details (Title, ref. number, general description, language)	Status: PU=Public CO=Confidential

INTELLECTUAL PROPERTY RIGHTS

Type of IPR	KNOWLEDGE: Tick a box and give the corresponding details(reference numbers, etc) if appropriate					Pre-existing know-how Tick a box and give the corresponding details(reference numbers, etc) if appropriate	
	Current				Foreseen	Tick	Details
	Tick	NoP[1)]	NoI[2)]	Details	Tick		
Patent applied for							
Patent granted							
Patent search carried out							
Registered design							
Trademark applications							
Copyrights							
Secret know-how							
Other - please specify:							

1) Number of **P**riority (national) applications/patents
2) Number of **I**nternationally extended applications/patents

MARKET APPLICATION SECTORS

Market application sectors

CURRENT STAGE OF DEVELOPMENT

Current stage of development	
Other:	

Quantified data about the result

Items (about the results)	Actual current quantity	Estimated (or future) quantity
Time to application / market (in months from the end of the research project)		
Number of (public or private) entities potentially involved in the implementation of the result:		
of which: number of SMEs:		
of which: number of entities in third countries (outside EU):		
Targeted user audience: of reachable people		
S&T publications (referenced publications only)		
publications addressing general public (e.g. CD-ROMs, WEB sites)		
publications addressing decision takers / public authorities / etc.		
Visibility for the general public	YES	

Further collaboration, dissemination and use of the result

COLLABORATIONS SOUGHT

R&D	Further research or development		FIN	Financial support	
LIC	Licence agreement		VC	Venture capital/spin-off funding	
MAN	Manufacturing agreement		PPP	Private-public partnership	
MKT	Marketing agreement		INFO	Information exchange/training	
JV	Establish a joint enterprise or partnership		CONS	Available for consultancy	
Other	(please specify)				
Details:					

POTENTIAL OFFERED FOR FURTHER DISSEMINATION AND USE

PROFILE OF ADDITIONAL PARTNER(S) FOR FURTHER DISSEMINATION AND USE

No.	Title
14	OCERA System Metrics (Metrics)

CONTACT PERSON FOR THIS RESULT

Name	
Position	
Organisation	
Address	,
Telephone	
Fax	
E-mail	
URL	
Specific Result URL	

SUMMARY

SUBJECT DESCRIPTORS CODES

DOCUMENTATION AND INFORMATION ON THE RESULT

Documentation type	Details (Title, ref. number, general description, language)	Status: PU=Public CO=Confidential

INTELLECTUAL PROPERTY RIGHTS

Type of IPR	KNOWLEDGE: Tick a box and give the corresponding details(reference numbers, etc) if appropriate					Pre-existing know-how Tick a box and give the corresponding details(reference numbers, etc) if appropriate	
	Current				Foreseen	Tick	Details
	Tick	NoP[1)]	NoI[2)]	Details	Tick		
Patent applied for							
Patent granted							
Patent search carried out							
Registered design							
Trademark applications							
Copyrights							
Secret know-how							
Other - please specify:							

1) Number of **P**riority (national) applications/patents
2) Number of **I**nternationally extended applications/patents

MARKET APPLICATION SECTORS

Market application sectors

CURRENT STAGE OF DEVELOPMENT

Current stage of development	
Other:	

Quantified data about the result

Items (about the results)	Actual current quantity	Estimated (or future) quantity
Time to application / market (in months from the end of the research project)		
Number of (public or private) entities potentially involved in the implementation of the result:		
of which: number of SMEs:		
of which: number of entities in third countries (outside EU):		
Targeted user audience: of reachable people		
S&T publications (referenced publications only)		
publications addressing general public (e.g. CD-ROMs, WEB sites)		
publications addressing decision takers / public authorities / etc.		
Visibility for the general public	YES	

Further collaboration, dissemination and use of the result

COLLABORATIONS SOUGHT

R&D	Further research or development		**FIN**	Financial support	
LIC	Licence agreement		**VC**	Venture capital/spin-off funding	
MAN	Manufacturing agreement		**PPP**	Private-public partnership	
MKT	Marketing agreement		**INFO**	Information exchange/training	
JV	Establish a joint enterprise or partnership		**CONS**	Available for consultancy	
Other	(please specify)				
Details:					

POTENTIAL OFFERED FOR FURTHER DISSEMINATION AND USE

PROFILE OF ADDITIONAL PARTNER(S) FOR FURTHER DISSEMINATION AND USE

No.	Title
15	RtlIDE a IDE Device Driver

CONTACT PERSON FOR THIS RESULT

Name	
Position	
Organisation	
Address	,
Telephone	
Fax	
E-mail	
URL	
Specific Result URL	

SUMMARY

SUBJECT DESCRIPTORS CODES

DOCUMENTATION AND INFORMATION ON THE RESULT

Documentation type	Details (Title, ref. number, general description, language)	Status: PU=Public CO=Confidential

INTELLECTUAL PROPERTY RIGHTS

Type of IPR	KNOWLEDGE: Tick a box and give the corresponding details(reference numbers, etc) if appropriate					Pre-existing know-how Tick a box and give the corresponding details(reference numbers, etc) if appropriate	
	Current				Foreseen	Tick	Details
	Tick	NoP[1)]	NoI[2)]	Details	Tick		
Patent applied for							
Patent granted							
Patent search carried out							
Registered design							
Trademark applications							
Copyrights							
Secret know-how							
Other - please specify:							

1) Number of **P**riority (national) applications/patents
2) Number of **I**nternationally extended applications/patents

MARKET APPLICATION SECTORS

Market application sectors

CURRENT STAGE OF DEVELOPMENT

Current stage of development	
Other:	

Quantified data about the result

Items (about the results)	Actual current quantity	Estimated (or future) quantity
Time to application / market (in months from the end of the research project)		
Number of (public or private) entities potentially involved in the implementation of the result:		
of which: number of SMEs:		
of which: number of entities in third countries (outside EU):		
Targeted user audience: of reachable people		
S&T publications (referenced publications only)		
publications addressing general public (e.g. CD-ROMs, WEB sites)		
publications addressing decision takers / public authorities / etc.		
Visibility for the general public	YES	

Further collaboration, dissemination and use of the result

COLLABORATIONS SOUGHT

R&D	Further research or development		FIN	Financial support	
LIC	Licence agreement		VC	Venture capital/spin-off funding	
MAN	Manufacturing agreement		PPP	Private-public partnership	
MKT	Marketing agreement		INFO	Information exchange/training	
JV	Establish a joint enterprise or partnership		CONS	Available for consultancy	
Other	(please specify)				
Details:					

POTENTIAL OFFERED FOR FURTHER DISSEMINATION AND USE

PROFILE OF ADDITIONAL PARTNER(S) FOR FURTHER DISSEMINATION AND USE

No.	Title
16	rtlFS A file system for RTLinux

CONTACT PERSON FOR THIS RESULT

Name	
Position	
Organisation	
Address	,
Telephone	
Fax	
E-mail	
URL	
Specific Result URL	

SUMMARY

SUBJECT DESCRIPTORS CODES

DOCUMENTATION AND INFORMATION ON THE RESULT

Documentation type	Details (Title, ref. number, general description, language)	Status: PU=Public CO=Confidential

INTELLECTUAL PROPERTY RIGHTS

Type of IPR	KNOWLEDGE: Tick a box and give the corresponding details(reference numbers, etc) if appropriate					Pre-existing know-how Tick a box and give the corresponding details(reference numbers, etc) if appropriate	
	Current				Foreseen	Tick	Details
	Tick	NoP[1)]	NoI[2)]	Details	Tick		
Patent applied for							
Patent granted							
Patent search carried out							
Registered design							
Trademark applications							
Copyrights							
Secret know-how							
Other - please specify:							

1) Number of **P**riority (national) applications/patents
2) Number of **I**nternationally extended applications/patents

MARKET APPLICATION SECTORS

Market application sectors

CURRENT STAGE OF DEVELOPMENT

Current stage of development	
Other:	

Quantified data about the result

Items (about the results)	Actual current quantity	Estimated (or future) quantity
Time to application / market (in months from the end of the research project)		
Number of (public or private) entities potentially involved in the implementation of the result:		
of which: number of SMEs:		
of which: number of entities in third countries (outside EU):		
Targeted user audience: of reachable people		
S&T publications (referenced publications only)		
publications addressing general public (e.g. CD-ROMs, WEB sites)		
publications addressing decision takers / public authorities / etc.		
Visibility for the general public	YES	

Further collaboration, dissemination and use of the result

COLLABORATIONS SOUGHT

R&D	Further research or development		FIN	Financial support	
LIC	Licence agreement		VC	Venture capital/spin-off funding	
MAN	Manufacturing agreement		PPP	Private-public partnership	
MKT	Marketing agreement		INFO	Information exchange/training	
JV	Establish a joint enterprise or partnership		CONS	Available for consultancy	
Other	(please specify)				
Details:					

POTENTIAL OFFERED FOR FURTHER DISSEMINATION AND USE

PROFILE OF ADDITIONAL PARTNER(S) FOR FURTHER DISSEMINATION AND USE

No.	Title
17	SaRtl Stand alone OCERA RtLinux

CONTACT PERSON FOR THIS RESULT

Name	
Position	
Organisation	
Address	,
Telephone	
Fax	
E-mail	
URL	
Specific Result URL	

SUMMARY

SUBJECT DESCRIPTORS CODES

DOCUMENTATION AND INFORMATION ON THE RESULT

Documentation type	Details (Title, ref. number, general description, language)	Status: PU=Public CO=Confidential

INTELLECTUAL PROPERTY RIGHTS

Type of IPR	KNOWLEDGE: Tick a box and give the corresponding details(reference numbers, etc) if appropriate					Pre-existing know-how Tick a box and give the corresponding details(reference numbers, etc) if appropriate	
	Current				Foreseen	Tick	Details
	Tick	NoP[1)]	NoI[2)]	Details	Tick		
Patent applied for							
Patent granted							
Patent search carried out							
Registered design							
Trademark applications							
Copyrights							
Secret know-how							
Other - please specify:							

1) Number of **P**riority (national) applications/patents
2) Number of **I**nternationally extended applications/patents

MARKET APPLICATION SECTORS

Market application sectors

CURRENT STAGE OF DEVELOPMENT

Current stage of development	
Other:	

Quantified data about the result

Items (about the results)	Actual current quantity	Estimated (or future) quantity
Time to application / market (in months from the end of the research project)		
Number of (public or private) entities potentially involved in the implementation of the result:		
of which: number of SMEs:		
of which: number of entities in third countries (outside EU):		
Targeted user audience: of reachable people		
S&T publications (referenced publications only)		
publications addressing general public (e.g. CD-ROMs, WEB sites)		
publications addressing decision takers / public authorities / etc.		
Visibility for the general public	YES	

Further collaboration, dissemination and use of the result

COLLABORATIONS SOUGHT

R&D	Further research or development		**FIN**	Financial support	
LIC	Licence agreement		**VC**	Venture capital/spin-off funding	
MAN	Manufacturing agreement		**PPP**	Private-public partnership	
MKT	Marketing agreement		**INFO**	Information exchange/training	
JV	Establish a joint enterprise or partnership		**CONS**	Available for consultancy	
Other	(please specify)				
Details:					

POTENTIAL OFFERED FOR FURTHER DISSEMINATION AND USE

PROFILE OF ADDITIONAL PARTNER(S) FOR FURTHER DISSEMINATION AND USE

No.	Title
18	ORTE - open source implementation of Real-Time Publish-Subscribe middleware

CONTACT PERSON FOR THIS RESULT

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Specific Result URL	

SUMMARY

ORTE (Open Real-Time Ethernet) is an open-source implementation of RTPS middleware Real-Time (Publish-Subscribe). It is built upon UDP/IP and tested on Ethernet. This middleware can be used in realtime control applications, which typically have limited and relatively small input load compared to the high bandwidth. To derive the influence of the operating

SUBJECT DESCRIPTORS CODES

DOCUMENTATION AND INFORMATION ON THE RESULT

Documentation type	Details (Title, ref. number, general description, language)	Status: PU=Public CO=Confidential

INTELLECTUAL PROPERTY RIGHTS

Type of IPR	KNOWLEDGE: Tick a box and give the corresponding details(reference numbers, etc) if appropriate					Pre-existing know-how Tick a box and give the corresponding details(reference numbers, etc) if appropriate	
	Current				Foreseen	Tick	Details
	Tick	NoP[1)]	NoI[2)]	Details	Tick		
Patent applied for							
Patent granted							
Patent search carried out							
Registered design							
Trademark applications							
Copyrights							

Secret know-how						
Other - please specify:						

1) Number of **P**riority (national) applications/patents
2) Number of **I**nternationally extended applications/patents

MARKET APPLICATION SECTORS

Market application sectors
72 Computer and related activities 73 Research and development 80 Education

CURRENT STAGE OF DEVELOPMENT

Current stage of development	
Other:	

Quantified data about the result

Items (about the results)	**Actual current quantity**	**Estimated (or future) quantity**
Time to application / market (in months from the end of the research project)		
Number of (public or private) entities potentially involved in the implementation of the result:		
of which: number of SMEs:		
of which: number of entities in third countries (outside EU):		
Targeted user audience: of reachable people		
S&T publications (referenced publications only)	3	
publications addressing general public (e.g. CD-ROMs, WEB sites)	2	
publications addressing decision takers / public authorities / etc.		
Visibility for the general public	YES	

Further collaboration, dissemination and use of the result

COLLABORATIONS SOUGHT

R&D	Further research or development	**v**	**FIN**	Financial support	
LIC	Licence agreement	**v**	**VC**	Venture capital/spin-off funding	
MAN	Manufacturing agreement		**PPP**	Private-public partnership	
MKT	Marketing agreement		**INFO**	Information exchange/training	
JV	Establish a joint enterprise or partnership		**CONS**	Available for consultancy	
Other	(please specify)				
Details:					

POTENTIAL OFFERED FOR FURTHER DISSEMINATION AND USE

PROFILE OF ADDITIONAL PARTNER(S) FOR FURTHER DISSEMINATION AND USE

No.	Title
19	LinCAN - Portable CAN driver

CONTACT PERSON FOR THIS RESULT

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Specific Result URL	

SUMMARY

The LinCAN driver is the loadable module for the Linux kernel which implements CAN driver. The driver communicates and controls one or more CAN controllers chips. Each chip/CAN interface is represented to the applications as one or more CAN message objects accessible as character devices. The application can open the character device and use read/write system calls for CAN messages transmission or reception through the connected message object. The parameters of the message object can be modified by the IOCTL system call. The closing of the character device releases resources allocated by the application.

SUBJECT DESCRIPTORS CODES

DOCUMENTATION AND INFORMATION ON THE RESULT

Documentation type	Details (Title, ref. number, general description, language)	Status: PU=Public CO=Confidential

INTELLECTUAL PROPERTY RIGHTS

Type of IPR	KNOWLEDGE: Tick a box and give the corresponding details(reference numbers, etc) if appropriate					Pre-existing know-how Tick a box and give the corresponding details(reference numbers, etc) if appropriate	
	Current				Foreseen	Tick	Details
	Tick	NoP[1)]	NoI[2)]	Details	Tick		
Patent applied for							
Patent granted							
Patent search carried out							
Registered design							
Trademark applications							
Copyrights							

Secret know-how						
Other - please specify:						

1) Number of **P**riority (national) applications/patents
2) Number of **I**nternationally extended applications/patents

MARKET APPLICATION SECTORS

Market application sectors
72 Computer and related activities 73 Research and development 80 Education

CURRENT STAGE OF DEVELOPMENT

Current stage of development	
Other:	

Quantified data about the result

Items (about the results)	**Actual current quantity**	**Estimated (or future) quantity**
Time to application / market (in months from the end of the research project)		
Number of (public or private) entities potentially involved in the implementation of the result:		
of which: number of SMEs:		
of which: number of entities in third countries (outside EU):		
Targeted user audience: of reachable people		
S&T publications (referenced publications only)	2	
publications addressing general public (e.g. CD-ROMs, WEB sites)	2	
publications addressing decision takers / public authorities / etc.		
Visibility for the general public	YES	

Further collaboration, dissemination and use of the result

COLLABORATIONS SOUGHT

R&D	Further research or development	**v**	**FIN**	Financial support	
LIC	Licence agreement	**v**	**VC**	Venture capital/spin-off funding	
MAN	Manufacturing agreement		**PPP**	Private-public partnership	
MKT	Marketing agreement		**INFO**	Information exchange/training	
JV	Establish a joint enterprise or partnership		**CONS**	Available for consultancy	
Other	(please specify)				
Details:					

POTENTIAL OFFERED FOR FURTHER DISSEMINATION AND USE

PROFILE OF ADDITIONAL PARTNER(S) FOR FURTHER DISSEMINATION AND USE

No.	Title
20	Open source implementation of CANopen protocol

CONTACT PERSON FOR THIS RESULT

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Organisation	
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Specific Result URL	

SUMMARY

CANopen device is a software library based on CANopen FSM (Finite State Machine). CANopen device should be compatible with standard industrial CANopen devices according to CiA Draft Standard 301. There are two main CANopen device applications - CANmaster and CANslave. Device functionality is configured by loading CANopen device specific EDS (Electronic Data Sheet). CANopen slave is linked with hardware module to cooperade with real device hardware.

SUBJECT DESCRIPTORS CODES

DOCUMENTATION AND INFORMATION ON THE RESULT

Documentation type	Details (Title, ref. number, general description, language)	Status: PU=Public CO=Confidential

INTELLECTUAL PROPERTY RIGHTS

Type of IPR	KNOWLEDGE: Tick a box and give the corresponding details(reference numbers, etc) if appropriate					Pre-existing know-how Tick a box and give the corresponding details(reference numbers, etc) if appropriate	
	Current				Foreseen	Tick	Details
	Tick	NoP[1)]	NoI[2)]	Details	Tick		
Patent applied for							
Patent granted							
Patent search carried out							
Registered design							
Trademark applications							
Copyrights							

Secret know-how						
Other - please specify:						

1) Number of **P**riority (national) applications/patents
2) Number of **I**nternationally extended applications/patents

MARKET APPLICATION SECTORS

Market application sectors
72 Computer and related activities 73 Research and development 80 Education

CURRENT STAGE OF DEVELOPMENT

Current stage of development	
Other:	

Quantified data about the result

Items (about the results)	**Actual current quantity**	**Estimated (or future) quantity**
Time to application / market (in months from the end of the research project)		
Number of (public or private) entities potentially involved in the implementation of the result:		
of which: number of SMEs:		
of which: number of entities in third countries (outside EU):		
Targeted user audience: of reachable people		
S&T publications (referenced publications only)	3	
publications addressing general public (e.g. CD-ROMs, WEB sites)	2	
publications addressing decision takers / public authorities / etc.		
Visibility for the general public	YES	

Further collaboration, dissemination and use of the result

COLLABORATIONS SOUGHT

R&D	Further research or development	**v**	**FIN**	Financial support	
LIC	Licence agreement	**v**	**VC**	Venture capital/spin-off funding	
MAN	Manufacturing agreement		**PPP**	Private-public partnership	
MKT	Marketing agreement		**INFO**	Information exchange/training	**v**
JV	Establish a joint enterprise or partnership		**CONS**	Available for consultancy	**v**
Other	(please specify)				
Details:					

POTENTIAL OFFERED FOR FURTHER DISSEMINATION AND USE

PROFILE OF ADDITIONAL PARTNER(S) FOR FURTHER DISSEMINATION AND USE

No.	Title
21	Verification of distributed applications by timed automata

CONTACT PERSON FOR THIS RESULT

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Specific Result URL	

SUMMARY

This component is theoretical study offering methodology and tool support for model checking of real-time applications running under multitasking operating system. Theoretical background is based on timed automata by Allur and Dill. As this approach does not allow to model pre-emption we focus on cooperative scheduling. The cooperative scheduler under assumption performs rescheduling in specific points given by "yield" instruction in the application processes. In the addition, interrupt service routines are considered, and their enabling/disabling is controlled by interrupt server considering specified server capacity. The server capacity has influence on the margins of the computation times in the application processes. Such systems, used in practical real-time applications, can be modelled by timed automata and further verified by existing model checking tools. The approach is illustrated in the form of examples in the real-time verification tool UPPAAL.

SUBJECT DESCRIPTORS CODES

DOCUMENTATION AND INFORMATION ON THE RESULT

Documentation type	Details (Title, ref. number, general description, language)	Status: PU=Public CO=Confidential

INTELLECTUAL PROPERTY RIGHTS

Type of IPR	KNOWLEDGE: Tick a box and give the corresponding details(reference numbers, etc) if appropriate					Pre-existing know-how Tick a box and give the corresponding details(reference numbers, etc) if appropriate	
	Current				Foreseen	Tick	Details
	Tick	NoP[1)]	NoI[2)]	Details	Tick		
Patent applied for							
Patent granted							
Patent search carried out							

Registered design						
Trademark applications						
Copyrights						
Secret know-how						
Other - please specify:						

1) Number of **P**riority (national) applications/patents
2) Number of **I**nternationally extended applications/patents

MARKET APPLICATION SECTORS

Market application sectors
72 Computer and related activities 73 Research and development 80 Education

CURRENT STAGE OF DEVELOPMENT

Current stage of development	
Other:	

Quantified data about the result

Items (about the results)	**Actual current quantity**	**Estimated (or future) quantity**
Time to application / market (in months from the end of the research project)		
Number of (public or private) entities potentially involved in the implementation of the result:		
of which: number of SMEs:		
of which: number of entities in third countries (outside EU):		
Targeted user audience: of reachable people		
S&T publications (referenced publications only)		
publications addressing general public (e.g. CD-ROMs, WEB sites)	3	
publications addressing decision takers / public authorities / etc.		
Visibility for the general public	YES	

Further collaboration, dissemination and use of the result

COLLABORATIONS SOUGHT

R&D	Further research or development	**v**	**FIN**	Financial support	
LIC	Licence agreement	**v**	**VC**	Venture capital/spin-off funding	
MAN	Manufacturing agreement		**PPP**	Private-public partnership	
MKT	Marketing agreement		**INFO**	Information exchange/training	**v**
JV	Establish a joint enterprise or partnership		**CONS**	Available for consultancy	
Other	(please specify)				
Details:					

POTENTIAL OFFERED FOR FURTHER DISSEMINATION AND USE

PROFILE OF ADDITIONAL PARTNER(S) FOR FURTHER DISSEMINATION AND USE

No.	Title
22	Mobile Video Viewer application for the digital video recording systemsof the company to work on PDA units for patrolling guards

CONTACT PERSON FOR THIS RESULT

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URL	http://www.visual-tools.com
Specific Result URL	

SUMMARY

The Visual Tools Wireless Video Viewer (VTWV) is a portable and lightweight application to receive and present video streams in a handheld device. It is integrated with the family of Digital Video Recorders and Transmitters of Visual Tools. Overview of the Commercial Use The core business of Visual Tools is the selling of digital video recorders transmitters for security applications. The company has a leading position in remote video management tools. These tools are video receiving applications used to have fast and easy remote access to the live video or recorded sequences provided by the different digital video units manufactured by the company. The VTWV application developed in Ocera will be part of the video receiving applications provided by the company to widen the remote access to their video systems “from anywhere at any time.” The VTWV application will provide a better support of the VT digital video recorders/transmitters in several market segments. This will strengthen the position of the company in some market segments in which it is already present and it will enable the selling of the products in other market segments in which company presence is still limited. In general, scenarios of major interest for VTWV are those situations in which a moving patrol would benefit from access to images of an incident before getting to the incident spot. The following three application and associated market segments involve three different scenarios benefitting from this application. · Bank branches: Police support in case of hold-up. For bank branch premises installing a wireless connection, the police would have access to the camera images before entering the place in case of hold-up. This information would be crucial to know the environment inside the place, e.g. existence of hostages, number of criminals, situation inside the premises,... · Medium to large buildings: In large buildings, such as commercial centers, office buildings, electricity or gas station and other vulnerable installations, security guards are continuously patrolling the place. The ability to receive images from areas susceptible of intrusion or other risk (e.g. fire) is vital to evaluate the risk situation and react with the appropriate means in a shorter time. · Security installation process: In all camera installations, cameras need to be adjusted. This process is particularly important for cameras providing images to be used in computer vision applications (e.g. people counting with overhead cameras). The ability to provide a wireless imaging device which could be connected to the digital video recorder/transmitter (even with a temporary wireless connection) will help very much to adjust cameras in closed-circuit TV installations. Technical Results VTWV has been developed in Java running on the portable and fast Java Virtual Machine EWE. Native code for fast video decoding was ported and interfaced to the JVM-Ewe virtual machine through the native interface provided by the Ewe developers (porting is processor-dependent). The main features of the VTWV are as follows. - Automatic discovery of VT DVRT units in the LAN. The application broadcast a request packet over the wireless LAN and all the digital video recorders connected to the LAN respond with their IP addresses. This information can be used to build up a list of available nodes to which the system can connect (provided that the input password is known to the application). - Reception and playback of the digital video streams from the selected camera. After connection, the application can request images from one of

the cameras connected to the connecting unit. Camera selection can be changed with a simple drop-down menu. - Constant frame rate and smooth playback when using the OCERA QoS component. The Ocera QoS component can be contained in the RT-Linux kernel and embedded in the application. When it is used the rendering rate is much more regular and the quality of the playback improves. Dissemination The VTWV has been shown to end users and potential customers in different trade shows and exhibitions. In particular, the application was displayed in the following events during year 2004. - Sicur-2004. Bi-annual security exhibition in Spain, taking place in February 2004. The digital video recorders of the company were shown to interested customers using two PDA devices running the VTWV application and the Ocera kernel. - IFSEC-2004. Annual security exhibition in Birmingham, it is the most important security trade show at European level. - Tele-5 News. The VTWV application was shown by Tele-5 in the prime time news. Further dissemination is anticipated after project completion following exploitation plans.

SUBJECT DESCRIPTORS CODES
120 COMMUNICATION ENGINEERING/TECHNOLOGY 121 COMMUNICATION SCIENCES/HUMAN COMPUTER INTERACTIONS 130 COMPUTER TECHNOLOGY/GRAPHICS, META COMPUTING 193 EMERGENCY MANAGEMENT 310 IMAGING, IMAGE PROCESSING

DOCUMENTATION AND INFORMATION ON THE RESULT

Documentation type	**Details (Title, ref. number, general description, language)**	**Status: PU=Public CO=Confidential**
VTWV User's Manual	Description of the application and details of the performance test using the Quality of Service component of Ocera	Confidential

INTELLECTUAL PROPERTY RIGHTS

Type of IPR	**KNOWLEDGE: Tick a box and give the corresponding details(reference numbers, etc) if appropriate**					**Pre-existing know-how Tick a box and give the corresponding details(reference numbers, etc) if appropriate**	
	Current				**Foreseen**	**Tick**	**Details**
	Tick	**NoP[1)]**	**NoI[2)]**	**Details**	**Tick**		
Patent applied for						**v**	VT Digital Video Recorders Transmitters architecture and video server interface
Patent granted							
Patent search carried out							
Registered design							
Trademark applications							
Copyrights							
Secret know-how							

Other - please specify:						

1) Number of **P**riority (national) applications/patents
2) Number of **I**nternationally extended applications/patents

MARKET APPLICATION SECTORS

Market application sectors
55 Hotels and restaurants 63 Supporting and auxiliary transport activities; activities ... 72 Computer and related activities 95 Private households with employed persons

CURRENT STAGE OF DEVELOPMENT

Current stage of development	
Other:	

Quantified data about the result

Items (about the results)	**Actual current quantity**	**Estimated (or future) quantity**
Time to application / market (in months from the end of the research project)		
Number of (public or private) entities potentially involved in the implementation of the result:		
of which: number of SMEs:		
of which: number of entities in third countries (outside EU):		
Targeted user audience: of reachable people		
S&T publications (referenced publications only)		
publications addressing general public (e.g. CD-ROMs, WEB sites)		
publications addressing decision takers / public authorities / etc.		
Visibility for the general public	YES	

Further collaboration, dissemination and use of the result

COLLABORATIONS SOUGHT

R&D	Further research or development		**FIN**	Financial support	
LIC	Licence agreement		**VC**	Venture capital/spin-off funding	
MAN	Manufacturing agreement		**PPP**	Private-public partnership	
MKT	Marketing agreement		**INFO**	Information exchange/training	
JV	Establish a joint enterprise or partnership		**CONS**	Available for consultancy	
Other	(please specify)				
Details:					

POTENTIAL OFFERED FOR FURTHER DISSEMINATION AND USE

PROFILE OF ADDITIONAL PARTNER(S) FOR FURTHER DISSEMINATION AND USE

No.	Title
23	Embedded digital video recorder with people counting capabilities based in the Strong-ARM processor (XScale)

CONTACT PERSON FOR THIS RESULT

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E-mail	fgomez@visual-tools.com
URL	http://www.visual-tools.com
Specific Result URL	

SUMMARY

This is an embedded unit based in the Xscale microprocessor running at 400 MHz which is used to implement functions of: digital video recording, video transmission and people counting capabilities all in the same unit. The ability to share the CPU processing power between the different activities is key to the ability to provide the adequate quality of service in all of them. The product is oriented to provide video surveillance functions and counting capacity for small shops and retail chains having outlets of different size. The ability to aggregate the counting information from all the remote units of a certain chain makes the product especially attractive for this scenario. The product features two camera inputs which can be used to connect one video surveillance cameras and one overhead cameras for counting people (the product is flexible enough to allow the connection of only video surveillance cameras or only counting cameras). The video surveillance camera can be recorded in hard disk and it can be transmitted to a remote PC for display purposes. The people counting data is displayed in the screen using a web interface. It can also be downloaded to a remote place for further analysis and comparison with data of other shops. The product information, data sheets, user's manual, etc. will be disseminated when product is launched.

SUBJECT DESCRIPTORS CODES

120 COMMUNICATION ENGINEERING/TECHNOLOGY
121 COMMUNICATION SCIENCES/HUMAN COMPUTER INTERACTIONS
310 IMAGING, IMAGE PROCESSING
558 SECURITY SYSTEMS
411 MULTIMEDIA

DOCUMENTATION AND INFORMATION ON THE RESULT

Documentation type	Details (Title, ref. number, general description, language)	Status: PU=Public CO=Confidential
VS-Peco/Lite Data sheets	Data sheets and specification of the Peco-Lite product	Public

INTELLECTUAL PROPERTY RIGHTS

Type of IPR	KNOWLEDGE: Tick a box and give the corresponding details(reference numbers, etc) if appropriate	Pre-existing know-how Tick a box and give the corresponding details(reference

						numbers, etc) if appropriate	
	Current				Foreseen	Tick	Details
	Tick	NoP[1)]	NoI[2)]	Details	Tick		
Patent applied for							
Patent granted							
Patent search carried out							
Registered design							
Trademark applications							
Copyrights							
Secret know-how							
Other - please specify:							

1) Number of **P**riority (national) applications/patents
2) Number of **I**nternationally extended applications/patents

MARKET APPLICATION SECTORS

Market application sectors
52 Retail trade, except of motor vehicles and motorcycles; ... 55 Hotels and restaurants

CURRENT STAGE OF DEVELOPMENT

Current stage of development	Prototype/demonstrator available for testing
Other:	

Quantified data about the result

Items (about the results)	Actual current quantity	Estimated (or future) quantity
Time to application / market (in months from the end of the research project)	12	6
Number of (public or private) entities potentially involved in the implementation of the result:	2	2
of which: number of SMEs:	1	1
of which: number of entities in third countries (outside EU):	0	0
Targeted user audience: of reachable people		
S&T publications (referenced publications only)		
publications addressing general public (e.g. CD-ROMs, WEB sites)	2	2
publications addressing decision takers / public authorities / etc.	2	2
Visibility for the general public	YES	

Further collaboration, dissemination and use of the result

COLLABORATIONS SOUGHT

R&D	Further research or development		**FIN**	Financial support	
LIC	Licence agreement		**VC**	Venture capital/spin-off funding	
MAN	Manufacturing agreement		**PPP**	Private-public partnership	
MKT	Marketing agreement	**v**	**INFO**	Information exchange/training	
JV	Establish a joint enterprise or partnership		**CONS**	Available for consultancy	
Other	(please specify)				
Details:	Distributors in countries other than EMEA could be useful.				

POTENTIAL OFFERED FOR FURTHER DISSEMINATION AND USE

Product can be offered to distribute in the regions of interest.

PROFILE OF ADDITIONAL PARTNER(S) FOR FURTHER DISSEMINATION AND USE

- Distributors of security equipment (closed-circuit TV) in particular for retail customers

Exploitation plans

CONFIDENTIAL

I am the Co-ordinator of the above project, and confirm on behalf of the contracted Partners the information contained in this Technological Implementation Plan, and I authorise its public dissemination.

Signature: **Name:**

Date: **Organisation:**

close