

## Dissemination Plan



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<b>RESPONSIBLE AUTHOR</b>	Dan Tsafir
<b>REPLY TO</b>	<a href="mailto:dan@cs.technion.ac.il">dan@cs.technion.ac.il</a>
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<b>AUTHORS (PARTNER)</b>	Idan Yaniv (Technion)

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PARTICIPANTS		CONTACT
STMICROELECTRONICS SRL		<p>Giulio Urlini Email: <a href="mailto:Giulio.urlini@st.com">Giulio.urlini@st.com</a></p>
IBM ISRAEL SCIENCE AND TECHNOLOGY LTD		<p>Joel Nider Email: <a href="mailto:joeln@il.ibm.com">joeln@il.ibm.com</a></p>
HEWLETT PACKARD CENTRE DE COMPETENCES (FRANCE)		<p>Gallig Renaud Email: <a href="mailto:gallig.renaud@hp.com">gallig.renaud@hp.com</a></p>
NALLATECH LTD		<p>Craig Petrie Email: <a href="mailto:c.petrie@nallatech.com">c.petrie@nallatech.com</a></p>
ISTITUTO SUPERIORE MARIO BOELLA		<p>Olivier Terzo Email: <a href="mailto:terzo@ismb.it">terzo@ismb.it</a></p>
TECHNION ISRAEL INSTITUTE OF TECHNOLOGY		<p>Dan Tsafrir Email: <a href="mailto:dan@cs.technion.ac.il">dan@cs.technion.ac.il</a></p>
CSI PIEMONTE		<p>Vittorio Vallero Email: <a href="mailto:Vittorio.vallero@csi.it">Vittorio.vallero@csi.it</a></p>
NEAVIA TECHNOLOGIES		<p>Stéphane Gervais Email: <a href="mailto:s.gervais@lacroix.fr">s.gervais@lacroix.fr</a></p>
CERIOS GREEN BV		<p>Frank Verhagen Email: <a href="mailto:frank.verhagen@certios.nl">frank.verhagen@certios.nl</a></p>
TESEO SPA		<p>Stefano Serra Email: <a href="mailto:s.serra@teseo.clemessy.com">s.serra@teseo.clemessy.com</a></p>
DEPARTEMENT DE L'ISERE		<p>Olivier Latouille Email: <a href="mailto:olivier.latouille@isere.fr">olivier.latouille@isere.fr</a></p>



## Executive summary

This document, “Dissemination Plan”, defines the strategy that all the partners shall apply for publishing their OPERA research results throughout the project. Dissemination, in this context, is distributing information to various audiences within the academic community.

The OPERA findings and products will interest three “audiences” (or “stakeholders”): the scientific community, industrial companies, and the public. The dissemination plan (this deliverable) will target only the first one, while the communication strategy (Deliverable 8.1) will target the latter.

The OPERA project should disseminate its activities and results in a clear and engaging way. The document describes what OPERA is going to do to disseminate its findings: presenting the results in top-tier conferences and publishing papers in highly-ranked journals, publish internal reports for all the tasks, and organize events to spread the knowledge and innovations achieved during the OPERA project. To improve the end results, we set four measurable targets so we will be able to monitor and report the outcomes in the project meetings:

Target #1	papers published during the project	<b>6</b>
Target #2	researchers reached (e.g., attended the conferences where OPERA works were presented)	<b>2,000</b>
Target #3	reports per task	<b>&gt; 1</b>
Target #4	events/workshops organized	<b>6</b>

All partners of the OPERA project will contribute to the dissemination of the OPERA findings and products. We will track the progress of our dissemination activities and release two intermediate deliverables and a final deliverable that will report the progress along the project lifetime:

- Deliverable 8.8 – Dissemination Report 1 – M18.
- Deliverable 8.12 – Dissemination Report 2 – M26.
- Deliverable 8.14 – Final Dissemination Report – M36.

The choices that have been made, make us expect that hundreds/thousands of researchers and engineers will learn from the OPERA project. People in different organizations, and with different relations to the OPERA subject; students and faculty members, as well as small, large and small, commercial and public organizational bodies.

**TABLE OF CONTENTS**

1	INTRODUCTION.....	7
1.1	OBJECTIVES OF WP8.....	7
1.2	OBJECTIVES OF TASK 8.4.....	7
1.3	DELIVARABLE 8.4: DISSEMINATION PLAN .....	7
2	PURPOSE.....	9
3	AUDIENCE .....	10
4	MESSAGES .....	11
5	METHODS .....	12
6	CONFERENCES PLAN .....	13
6.1	POWER EFFICIENCY, PERFORMANCE, AND METRICS .....	13
6.2	COMPUTER ARCHITECTURE.....	14
6.3	SYSTEMS SOFTWARE .....	15
6.4	HARDWARE, SOFTWARE, AND THEIR INTERACTIONS.....	16
6.5	PARALLELISM .....	17
6.6	INTELLIGENT TRANSPORTATION SYSTEM .....	17
6.7	ANTENNA & EMC.....	18
7	JOURNALS PLAN .....	19
7.1	POWER EFFICIENCY, PERFORMANCE, AND METRICS .....	19
7.2	COMPUTER ARCHITECTURE.....	19
7.3	SYSTEMS SOFTWARE .....	19
7.4	HARDWARE, SOFTWARE, AND THEIR INTERACTIONS.....	20
7.5	PARALLELISM .....	20
8	TIMING .....	21
9	TARGETS .....	22
10	SUMMARY .....	23

## 1 INTRODUCTION

This document describes the official dissemination plan of the OPERA project. First the objectives of the eighth work package (WP8) are highlighted and then the objectives of task 8.4 (Dissemination). We then present the structure and scope of deliverable 8.4 (Dissemination Plan).

### 1.1 OBJECTIVES OF WP8

The overall objective of WP8 is to maximize the project's impact, communication and dissemination.

The main objectives of this WP are to:

- Define and execute an effective communication strategy established in the beginning of the project;
- Define, agree and execute a comprehensive dissemination strategy and plan with measurable goals;
- Follow-up on dissemination goals and report outcome to the Project Board;
- Coordinate the dissemination activities so that the knowledge created in the project and its results are properly disseminated to the appropriate target audiences;
- Publish project results in dedicated high impact journals, provided that all measures to protect the intellectual property are taken;
- Identify relevant project results and coordinate that results are being used to influence relevant standardisation bodies;
- Participate in joint activities organised by EU activity and policy groups and other EU funded projects, where relevant. It is further the objective to ensure the best possible foundation for an appropriate academic and commercial exploitation of the project results after the project has finished with the following objectives:
  - To arrange for proper identification and ownership of foreground IPR.
  - To prepare an initial market assessment and identification of potential lucrative target market segments.
  - To develop sustainable business plan for the successful deployment of OPERA advanced on Low Power Customised computing technology.
  - To set the basis for the exploitation of project results through a structured business plan.

### 1.2 OBJECTIVES OF TASK 8.4

The objectives of task 8.4, which are a part of those of WP8, are:

- support the understanding of new knowledge generated in the OPERA project;
- disseminate the OPERA project findings amongst the scientific community;
- promote progress beyond the project itself, by transferring the knowledge acquired to both the wide academic and industry in an effective and direct language.

### 1.3 DELIVARABLE 8.4: DISSEMINATION PLAN

Dissemination and communication are the processes of making the results and deliverables of a project available to the stakeholders and to the wider audience. They are both essential for the success of the project and for the sustainability of outputs in the long term. Dissemination and communication address different stakeholders.

Deliverable 8.4 is due in M4, and is the result of Task 8.4 (Dissemination) that was previously described. Deliverable 8.4 will define the project's dissemination strategy, set up an effective plan, and execute it on behalf of the consortium.

This document shall be followed by deliverables D8.2 (Exploitation plan) and D8.3 (Business plan), both public reports, due at M36 (November 2018), and accompanied by D8.1 (Communication Strategy), also due at M4 (March 2016).



We will describe the dissemination plan by answering five questions, as depicted in Figure 1. Each of the next sections of this document will address each of these five aspects. Finally, in order to improve the final results, we set quantifiable targets that allows us to monitor the progress along the project.

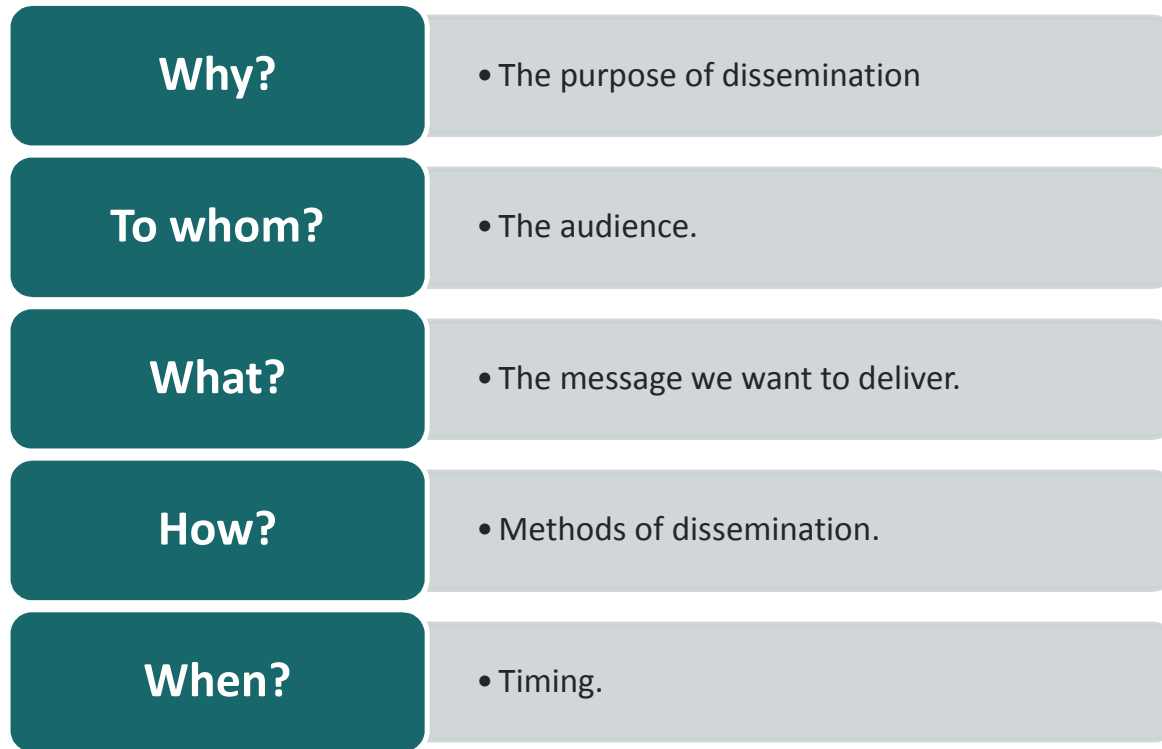


Figure 1: the five aspects of the dissemination plan.

## 2 PURPOSE

Every dissemination plan should have a purpose, i.e., to support or inform the project development in some way. Defining the purpose of dissemination is a first step to decide on the audience, message, method and timing of the dissemination. We will thus define the goals of disseminating the OPERA project and its results:

1. *Raise awareness* – let others know what the consortium members are doing in OPERA.
2. *Inform* – educate the scientific community with technological developments achieved in OPERA.
3. *Engage* – get input/feedback from the other teams under the Horizon 2020 grant.
4. *Promote* – ‘sell’ the OPERA outputs, products and results.

### 3 AUDIENCE

The dissemination process depends on the audience we want to reach and what they can do for the OPERA project. Therefore, the different individuals, groups, and organizations that will be interested in the project and its results need to be identified and informed. For that purpose, we will describe the potential stakeholders:

1. *The scientific community.* It is likely that technological innovations of the project will be valuable to a wider audience than the OPERA partners. We will share the results and lessons learned through articles, conference presentations, posters, etc.
2. *Internal audience.* The members of the project consortium need to stay well informed about the progress of the project to foster collaboration. Adequate internal dissemination can also help with external dissemination later.
3. *Other projects.* Sharing project results with coordinators and key actors of other projects under Horizon 2020, will ensure visibility and uptake of results, and provide opportunities to receive feedback, share experiences and discuss joint problems and issues.
4. *Industrial stakeholders.* Persons who will benefit from the outcomes of the project such as engineers, researchers, etc., can act as catalysts for the dissemination process.

## 4 MESSAGES

After setting the purpose and audience of the dissemination, we shall now define the key messages of the OPERA project. According to the OPERA grant proposal, we will give a not exhaustive list of key messages:

1. Small form factor data center (a datacenter in a box).
2. Heterogeneous architecture with the focus on the constraint of power consumption.
3. New generation servers (FPGA hardware that will be integrated).
4. Ultra-low power architecture (for specific computer vision application).
5. Metrics for energy efficiency.
6. Workload decomposition to dynamically execute tasks on the most suitable processing element.
7. Innovative power management.
8. Efficient virtual memory and HW/SW interfaces.

Note that this is a partial list, and OPERA will likely to have other contributions that we will want to disseminate.

When spreading the messages, we should keep the communication principles in mind:

- Messages should be clear, simple and easy to understand. The language should be appropriate for the target audience, and non-technical language should be used where possible, e.g., for press releases.
- Messages should be tailored to the receiver(s). It is of paramount importance to carefully consider what they should know about the OPERA project. It is possible to send the same message to different audiences, but the relevance of the message to the receiver should be checked each time.
- Information should be correct and realistic.

## 5 METHODS

While there are a wide variety of dissemination methods, it is important to select the right ones to get our message to the target audience and achieve our purposes, as were previously defined. In addition to more traditional dissemination methods, it can be useful to use less typical strategies. For example, workshops or online events can yield a higher level of engagement from stakeholders.

We will now list the methods that will be applied to disseminate the OPERA findings and products:

1. Publish conference papers, journal articles, posters and presentations.
2. Press releases can create awareness about the project.
3. Write in technological oriented websites or blogs, e.g., “HPCwire” ([www.hpcwire.com](http://www.hpcwire.com)), “The Next Platform” (<http://www.nextplatform.com>), “The register” (<http://www.theregister.co.uk>).
4. Upload internal reports for internal dissemination.
5. Organize workshops/events in the industrial companies that are part of the consortium.
6. Submit to scientific newsletters, e.g., the HiPEAC newsletter.

To further explain and plan the publications in top-tier conferences and highly-ranked journals, we provide a detailed survey of conferences, presented in section 6, and journals, given in section 7.

## 6 CONFERENCES PLAN

The research conducted under the OPERA project is likely to be of interest to the academic community. We suggest publishing the OPERA research findings in scientific conferences and journals (the published papers will also be available in the OPERA website). We provide here a (not exhaustive) list of known, top-tier Computer Science venues<sup>1</sup>. Other respectable venues exist and the list provided here to set the tone. Below we categorize the conferences according to their relevant fields of research, and then describe them in more detail.

### 6.1 POWER EFFICIENCY, PERFORMANCE, AND METRICS

**SIGMETRICS** (ACM SIGMETRICS / IFIP Performance) – a top-tier forum for the development and application of state-of-the-art, broadly applicable analytic, simulation and measurement-based performance evaluation techniques. Of particular interest is work that presents new performance evaluation methods or that creatively applies previously developed methods to make predictions about, or gain insights into key design trade-offs in, computer and networked systems.

**GreenMetrics** – a workshop to explore how improvements to or new uses of Information and Communication Technology (ICT) can improve the environmental, economic and/or social sustainability of ICT systems, networks, and applications. Topics of interest fall broadly into three primary areas: (1) Measuring, evaluating, or designing energy efficient systems in data centers, networking and communication protocols, etc. (2) Proposing new uses of ICT to improve the environmental, economic, and/or social sustainability of non-ICT processes. (3) Building a smarter, more sustainable electricity grid.

**ISPASS** (IEEE International Symposium on Performance Analysis of Systems and Software) – a forum for sharing advanced academic and industrial research work focused on performance analysis in the design of computer systems and software, in fields that include performance and power evaluation methodologies and analysis, power/performance analysis of commercial and experimental hardware and/or emerging workloads and software, application and system code tuning and optimization.

**IISWC** (IEEE International Symposium on Workload Characterization) – a forum dedicated to the understanding and characterization of emerging applications in consumer, commercial and scientific computing workloads that run on all types of computing systems. IISWC advocates works that bring solid understanding and analysis of existing workloads to improve the design of future computing machines.

**ICPE** (ACM/SPEC International Conference on Performance Engineering) – a forum for the theory and practice in the field of performance engineering. ICPE brings together researchers and industry practitioners to share ideas in the following topics: performance methods in software development, performance modelling and prediction, performance measurement and experimental analysis, benchmarks (workloads, scenarios, and implementations), performance in cloud, virtualized, and multi-core systems, and performance/power trade-offs.

**HotMetrics** (Workshop on Hot Topics in Measurement & Modelling of Computer Systems) – a forum to discuss emerging challenges in performance evaluation. Topics of interest include, but are not limited to: performance-related issues in the design and development of emerging computer systems and networks, methodologies and frameworks for performance modelling, analysis, or optimization, and tradeoffs/dependencies between performance and other metrics such as cost, energy consumption, reliability, availability, consistency, and security.

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<sup>1</sup> Computer Science papers are first published in conferences, and are later expanded into journal papers (in journals like: “ACM Transactions on...”, “IEEE Transactions on...”)

## 6.2 COMPUTER ARCHITECTURE

**HiPEAC** (High Performance and Embedded Architecture and Compilation) – a top-tier European forum dedicated to computer architecture, programming models, compilers and operating systems for embedded and general-purpose systems.

**MICRO** (International Symposium on Microarchitecture) – a premier forum for presenting, discussing, and debating innovative microarchitecture ideas and techniques for advanced computing and communication systems. This symposium brings together researchers in fields related to microarchitecture, compilers, chips, and systems for technical exchange on traditional microarchitecture topics and emerging research areas.

**ISCA** (International Symposium on Computer Architecture) – a top-tier forum for new ideas and experimental results in computer architecture, on a broad range of topics: processor, memory, and storage systems architecture, parallel and multi-/manycore systems, data center scale computing, application-specific, reconfigurable, or embedded architectures, accelerator-based architectures, power and energy efficient architectures, performance evaluation and measurement of real systems.

**HPCA** (IEEE International Symposium on High Performance Computer Architecture) – a high-quality forum for scientists and engineers to present latest research findings in all aspects of high-performance computer architecture. Topics of interest include: processor, cache, and memory architectures, parallel computer architectures, multicore architectures, power-efficient architectures and techniques, high-performance I/O systems, embedded and reconfigurable architectures, architectures for cloud-based HPC and data centers, performance modeling and evaluation, architectures for emerging technology and applications, and more.

**Euromicro DSD/SEAA** (Euromicro Conference on Digital System Design) – a high-level conference that addresses all aspects of digital systems (embedded, pervasive, high-performance) and mixed hardware/software system engineering. The conference provides a place where researchers (both from academia and industry) can present and discuss innovative ideas: starting from a system vision of the computer system, down to microarchitectures, digital circuits and VLSI techniques. Among the relevant aspects for the conference there are: challenges in today's and future advanced system architectures for embedded and high-performance hardware/software systems, application analysis and parallelization, design automation for all design levels, application of highly parallel architectures such as FPGAs and multicores. The conference also provides a set of special sessions dedicated to specific aspects of digital systems, such as dependability and fault tolerance, security, design of mixed critical systems, design of cyber-physical systems, etc. One of the session is also dedicated to present EU funded projects.

**DATE** (Design, Automation and Test in Europe) – the conference represents one of the main European event which address the hardware and software design, test and manufacturing of electronic circuits and systems, and where designers and design automation users, researchers and vendors, as well as specialists can meet each other. To this end, the conference covers the design process, test, and tools for design automation of electronic products ranging from integrated circuits to distributed large-scale systems. It also includes the elaboration of design requirements and new architectures for challenging application fields. Differently from other conferences, DATE provides an exhibition space which allows vendors showing new technology developments in all related aspects of digital design (Systems-on-Chip, IPs, Embedded Systems, ASICs, FPGAs and PCBs). Starting from the 19<sup>th</sup> edition, the conference provides a dedicated session for EU funded projects.

**SAMOS** (International Conference on Embedded Computer Systems: Architectures, Modeling and Simulation) – This international conference gathers researchers from academia and industry that want to share new ideas on all the main topics regarding computer architectures (including compilation and design aspects, application performance analysis, etc.) and their modelling and simulation (including

specification languages, design space exploration, simulation and verification, etc.). Differently from other high-level international conferences, SAMOS encourages the collaboration among researchers.

**MECO** (Mediterranean Conference on Embedded Computing) – recently emerged as an interesting forum where all aspects regarding computer systems can be presented and discussed, even if topics regarding embedded systems architecture and design are still preferred. Just to mention, conference topics include Systems on Chip (SoCs) and Multicore Systems, Mobile and Pervasive/Ubiquitous Computing, Cloud Computing in Embedded System Development, Reconfigurable Systems, etc. Albeit it is a relative young forum, it has rapidly gained the interest of the scientific community, as demonstrated by the growing number of associated workshops.

### 6.3 SYSTEMS SOFTWARE

**SOSP** (Symposium on Operating Systems Principles) – a top-tier conference for researchers and developers, from academic and industrial backgrounds, to present research that cover the full range of theory and practice of computer systems software. SOSP takes a broad view of the systems area and solicits contributions from many fields of systems practice, including, but not limited to, operating systems, file and storage systems, distributed systems, cloud systems, mobile systems, secure systems, embedded systems, dependable systems, system management, and virtualization.

**OSDI** (USENIX Symposium on Operating Systems Design and Implementation) – a top-tier conference for discussing the design, implementation, and implications of systems software. The OSDI Symposium emphasizes innovative research as well as quantified or insightful experiences in systems design and implementation. OSDI takes a broad view of the systems area and solicits contributions from many fields of systems practice, including, but not limited to, operating systems, file and storage systems, distributed systems, cloud computing, mobile systems, secure and reliable systems, systems aspects of big data, embedded systems, virtualization, and networking.

**EuroSys** – a conference that has a strong focus on systems research and development, including implications related to hardware and applications. Topics of interest include: operating systems, data base systems, real-time systems and middleware for networked, distributed, parallel, or embedded computing systems.

**USENIX ATC** (USENIX Annual Technical Conference) – promotes cutting-edge systems research in a variety of topics, including virtualization, system and network management and troubleshooting, cloud computing, security, privacy, and trust, mobile and wireless, and more.

**HotCloud** (Workshop on Hot Topics in Cloud Computing) – while cloud computing has gained traction over the past few years, many challenges remain in the design, implementation, and deployment of cloud computing. HotCloud is a forum to report on recent developments, discuss research in progress, and identify new/emerging "hot" trends in this important area. USENIX HotCloud is co-located with USENIX ATC.

**HotOS** (Workshop on Hot Topics in Operating Systems) – a top-tier forum to present new ideas about computer systems research. HotOS takes a broad view of systems, including operating systems, storage, networking, languages and language engineering, security, fault tolerance, and manageability.

**FAST** (USENIX Conference on File and Storage Technologies) – a top-tier conference for storage-system researchers and practitioners to explore new directions in the design, implementation, evaluation, and deployment of storage systems. "Storage systems" are interpreted broadly; everything from low-level storage devices to information management is of interest. Topics of interest include but are not limited to: archival storage systems, caching, replication, and consistency, cloud storage, database storage, distributed storage (wide-area, grid, peer-to-peer), empirical evaluation of storage systems, file system design, parallel I/O and storage systems, power-aware storage architectures, and more.



**CISIS** (International Conference on Complex, Intelligent, and Software Intensive Systems) – the aim of this conference is to provide a forum for presenting and discussing ideas and challenges regarding three interwoven research fields for ICT systems: software, intelligence and system complexity. Among the covered topics, we can mention: Monitoring and Control of Large Systems or Environments, Complex Systems and Dependability, Usability of Complex Systems, Heterogeneous Networking, Consideration of Software Intensive Systems as Complex Systems, etc.

#### 6.4 HARDWARE, SOFTWARE, AND THEIR INTERACTIONS

**ASPLOS** (International Conference on Architectural Support for Programming Languages and Operating Systems) – a top-tier forum for multidisciplinary systems research spanning computer architecture and hardware, programming languages and compilers, operating systems and networking, as well as applications and user interfaces. The research may target diverse goals such as performance, energy and thermal efficiency, resiliency, security, and sustainability.

**VEE** (ACM SIGPLAN/SIGOPS International Conference on Virtual Execution Environments) – a forum dedicated to the state-of-the-art of virtualization and its applicability. Topics of interest include (but are not limited to): architecture support for virtualization, operating system support for virtualization, virtual I/O, storage, and networking, memory management, performance analysis and debugging for virtual environments, virtualization in cloud computing, and virtualization technologies applied to specific problem domains such as HPC, real-time, and power management.

**SYSTOR** (ACM International Systems & Storage Conference) – promotes experimental and practical computer systems research and welcomes both academic and industrial contributions, including the following topics: operating systems, computer architecture, and their interactions, distributed, parallel, and cloud systems, file and storage systems, security, privacy, and trust, virtualization, embedded and real-time systems, fault tolerance, reliability, and availability, performance evaluation and workload characterization.

**ISMM** (International Symposium on Memory Management) – areas of interest include but are not limited to: memory system design and analysis, memory allocation and de-allocation, garbage collection algorithms and implementations, compiler analyses and tools to aid memory management, empirical analysis of heap intensive programs, memory management on accelerator architectures or other non-traditional systems, development and evaluation of open source implementations related to memory management.

**SOCC** (ACM Symposium on Cloud Computing) - encompasses diverse data management and systems topics such as software as a service, virtualization, scalable cloud data services, and data management and analytics at scale. Topics include but are not limited to: administration and manageability, data privacy, data services architectures, energy management, distributed and cloud networking, high availability and reliability, large scale cloud applications, resource management and performance, virtualization technologies, and more.

**Computing Frontiers** (ACM International Conference on Computing Frontiers) – promotes research about transformational technologies in the field of computing. A good forum to discuss early research, using far-reaching technologies that will provide the bases for revolutions such as: approximate and inexact computing, biological computing models, biologically-inspired architectures, 3D-stacked technology, ultra-low power designs, internet of things, wearable computing, machine and deep learning, cloud and grid systems, smart cities, emerging markets.

## 6.5 PARALLELISM

**IPDPS** (IEEE International Parallel & Distributed Processing Symposium) – promotes research in all areas of parallel and distributed processing, including the development of experimental or commercial systems, as well as emerging technologies. Topics of interest include, but are not limited to: parallel and distributed algorithms, data-intensive parallel algorithms, scheduling and load balancing, applications of parallel and distributed computing, big data applications, parallel crowd sourcing, parallel and distributed architectures, including architectures for instruction-level and thread-level parallelism, parallel and distributed software, and parallel and multi-core programming languages and compilers.

**PPoPP** (ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming) – a forum for leading work on all aspects of parallel programming, including foundational and theoretical aspects, techniques, languages, compilers, runtime systems, tools, and practical experiences. In the context of the symposium, “parallel programming” encompasses work on concurrent and parallel systems (multi-core, multithreaded, heterogeneous, clustered systems, distributed systems, grids, clouds, and large scale machines). Given the rise of parallel architectures into the consumer market (desktops, laptops, and mobile devices), PPoPP promotes work that addresses new parallel workloads, techniques, and tools that attempt to improve the productivity of parallel programming, and work towards improved synergy with such emerging architectures.

**SC** (The International Conference for High Performance Computing, Networking, Storage and Analysis) – brings together the international supercomputing community: a gathering of scientists, engineers, researchers, educators, programmers, system administrators and developers. The technical program includes presentations, papers, informative tutorials, timely research posters and Birds-of-a-Feather sessions. Additionally, an exhibition hall will feature the latest technologies and accomplishments from the world’s leading vendors, research organizations and universities.

**ICDCS** (IEEE International Conference on Distributed Computing Systems) – a forum for engineers and scientists in academia, industry and government to present their latest research findings in major and emerging areas of distributed computing. Topics of particular interest include, but are not limited to: distributed data management and analytics, cloud computing and data center systems, distributed operating systems and middleware, distributed algorithms and theory, distributed fault tolerance and dependability, security and privacy in distributed systems, social networks and crowd-sourcing, energy management and green distributed computing, mobility-based and wireless distributed systems, distributed systems for smart communities or the internet of things.

**Euro-Par** – a top-tier European conference covering all aspects of parallel and distributed processing, ranging from theory to practice, from small to the largest parallel and distributed systems and infrastructures, from fundamental computational problems to full-fledged applications, from architecture, compiler, language and interface design and implementation, to tools, support infrastructures, and application performance aspects.

## 6.6 INTELLIGENT TRANSPORTATION SYSTEM

**ITS European Congress** – the event consists of an extensive exhibition, with an adjacent area for live demonstrations and a program of high-level and technical sessions providing the opportunity for the industry’s experts and political leaders to discuss current issues both formally at over 100 sessions and more informally during an extensive social program. Specifically, the 2016 congress theme is “Delivering Future Cities Now” and is based on Glasgow’s pioneering work on Smart Cities which is based on the City’s and Scotland’s long history of innovation in Intelligent Traffic Control which started in 1967 with Europe’s first computerised traffic control system.

**ITS World Congress** – the world’s largest event in intelligent transport systems (ITS) and services. ITS technologies include communication, data processing and electronic technologies for in-vehicle, vehicle-to-vehicle, vehicle-to-infrastructure and mode-to-mode systems that increase transport safety and mobility, improve the sustainability of travel, reduce congestion, and improve the performance and competitiveness of all modes of transport.

**Intertraffic** - offers a fully comprehensive overview of the traffic and transport industry, provided by hundreds of exhibitors, all under one roof. Intertraffic Amsterdam is organised once every two years to ensure that the products shown at the exhibition are totally new. Topics of interest include: infrastructure, traffic management and parking.

## 6.7 ANTENNA & EMC

**International Symposium on Antennas and Propagation/USNC-URSI National Radio Science meeting (APS-URSI)** – more information can be found at: <http://www.2016apsursi.org/>

**European Conference on Antennas and Propagation (EuCAP)** – more information can be found at: <http://www.eucap.org/>

**International Symposium and Exhibition on Electromagnetic Compatibility (EMC Europe)** – more information can be found at: <http://www.emceurope.org/2016/>

**International Conference on Electromagnetics in Advanced Applications (ICEAA)** – more information can be found at: <http://www.iceaa-offshore.org/j3/>

## 7 JOURNALS PLAN

We provide here a list of known, top-tier journals that can be of interest of the OPERA consortium to publish project results. The list takes in consideration research fields that are of interest for the project, and for each of them provides a set of target journals characterized by a high impact factor. The list is not exhaustive, and additional journals will be eventually added during the project lifetime.

### 7.1 POWER EFFICIENCY, PERFORMANCE, AND METRICS

**TOMPECS** (ACM Transactions on Modeling and Performance Evaluation of Computing Systems) - publishes refereed articles on all aspects of the modeling, analysis, and performance evaluation of computing and communication systems. The target areas for the application of these performance evaluation methodologies are broad, and include traditional areas such as computer networks, computer systems, storage systems, telecommunication networks, and Web-based systems, as well as new areas such as data centers, green computing/communications, energy grid networks, and on-line social networks.

### 7.2 COMPUTER ARCHITECTURE

**FGCS** (Elsevier Future Generation Computer Systems) – It is a high-quality level international journal characterized by a high impact factor (2.786). It provides researcher a place where to publish innovative ideas and results for advancing in distributed systems, collaborative environments, high performance computing, Big Data on distributed infrastructures such as grids, clouds and the Internet of Things. More specifically, the aims and scope of FGCS cover new developments in the area of applications and application support (Novel applications for novel e-infrastructure, Big Data registration, processing and analyses, Methods for high performance and high throughput computing, etc.), Methods and tools (Distributed dynamic resource management and scheduling, Protocols and emerging standards, etc.), and theory (Process specification, Scaling and performance theory, Theoretical aspects of large scale communication and computation, etc.).

**TC** (IEEE Transactions on Computers) – It is an international journal with an impact factor of 1.66, targeting research papers that are of interest for researchers, developers, technical managers, and educators in the computer field. Areas covered by the journal include (but are not limited to): (1) – computer organizations and architectures; (2) operating systems, software systems, and communication protocols; (3) real-time and embedded systems; (4) digital devices, components, and interconnection networks; (5) specification, design, prototyping, and testing methods and tools; (6) performance, fault tolerance, reliability, security, and testability; (7) case studies and experimental and theoretical evaluations; (8) new and important applications and trends.

**TECS** (ACM Transactions on Embedded Computing Systems) – This journal (impact factor 0.47) aims at presenting innovative ideas and results regarding the design of embedded computing systems. In fact, modern embedded systems increasingly rely on sophisticated algorithms, analytical models, and methodologies implemented both at the software and hardware levels. The journal aims to present the leading work relating to the analysis, design, behavior, and experience with embedded computing systems.

### 7.3 SYSTEMS SOFTWARE

**TPDS** (IEEE Transactions on Parallel and Distributed systems) – It is a high-level high-quality international journal with an impact factor of 2.17. Aims and scope of the journal cover four main aspects of parallel and distributed systems: 1 – algorithms (e.g., models of computation; numerical, combinatorial, and data-intensive parallel algorithms; scalability of algorithms, etc.), 2 – applications (e.g., computational and data-enabled science and engineering; big data applications; parallel crowd sourcing; large-scale

social network analysis; etc.), 3 – architectures (e.g., architectures for instruction-level and thread-level parallelism; design, analysis implementation, fault resilience and performance measurements of multiple-processors; multicore processors; heterogeneous manycore systems; petascale and exascale systems designs, etc.), 4 – software (e.g., parallel and multicore programming languages and compilers; runtime systems; operating systems; Internet computing and web services; etc.)

**TCC** (IEEE Transactions on Cloud Computing) - It is an international journal targeting research papers that are of interest for researchers and developers in the cloud computing field. Areas covered by the journal include (but are not limited to): novel theory, algorithms, performance analyses and applications of techniques relating to cloud computing, cloud security, tradeoffs between privacy and utility of cloud, cloud standards, the architecture of cloud computing, cloud development tools, cloud software, cloud energy consumption, etc. Thw title also considers of interest publications covering Infrastructure as a Service (IaaS), Platform as a Service (PaaS), Software as a Service (SaaS), and Business Process as a Service (BPaaS) cloud models.

**Parallel Computing** (Elsevier) – it is an international journal with a high impact factor (1.511) which target is the presentation of practical results in using parallel computer systems, including HPC systems, parallel software tools and applications. More specifically, are in the scope of the journal the following aspects of parallel systems: System software for parallel computer systems, programming languages and new compilation techniques, operating systems, middleware, resource managers and schedulers, load-balancing, system and numeric libraries, general hardware architectures, parallel I/O systems, etc.

#### 7.4 HARDWARE, SOFTWARE, AND THEIR INTERACTIONS

**TACO** (ACM Transactions on Architecture and Code Optimization) – This transaction offers the opportunity to present major research results that cross the boundary of computer architecture and code optimization. Articles that appear in TACO present new techniques and concepts or report on experiences and experiments with actual systems, thus becoming of primary interest for computer architects, hardware or software developers, system designers and tool builders.

#### 7.5 PARALLELISM

**Journal of Parallel and Distributed Computing** (Elseviere) – This international journal is directed to researchers, engineers, and in general to users of parallel and distributed systems which main interest is in parallel processing and/or distributed computing (thus covering all aspects of such systems, from the design to their use). It aims at publishing original research papers and timely review articles on the theory, design, evaluation, and use of parallel and/or distributed computing systems.

## 8 TIMING

When planning the dissemination, it is important to decide when different dissemination activities will be most relevant. The ideal timing will depend on the progress of the project as well as on the agenda of the target audience. For instance, at the start of the project, it is best to focus on raising awareness; at the end on highlighting the achievements and deliverables. Conferences and journals papers should be published along the whole project duration.

## 9 TARGETS

Like all other elements of a project, dissemination activities are targeted and can be more or less successful. To find out if the dissemination strategy was well chosen and well implemented, we build an evaluation component into all major dissemination activities to monitor the quality and to see if they have achieved their aims.

We set the following targets:

1. How many papers were published along the OPERA project?  
Target: 6 in total, two per academic partner (Technion, ISMB, IBM).  
We will publish these papers in the OPERA website so they will be publicly available.
2. How many people attended the conferences where we presented OPERA works?  
How many people read the journals where OPERA works were published?  
Target: 2,000 in total.
3. How many internal reports we wrote?  
Target: at least one report for every task.
4. How many workshops/events we organized?  
Target: one per industrial partner.

## 10 SUMMARY

Dissemination is essential to ensure that the project results will be taken up and embedded.

Therefore, we developed a dissemination plan that explains:

- The reasons for dissemination.
- The target audience.
- The information we want to spread.
- How we will deliver it to the stakeholders.
- And when.

We also set measurable targets, so we can evaluate how good our dissemination is.