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EIFFEL

Evolved Internet Future for European Leadership

Document Number D2.1

**The Think Tank meeting plans and
the initial list of members**

Abstract:

This document details the meeting plans for the EIFFEL Think Tank, including tentative scheduling and locations of the meetings. Planning and invitation processes are also discussed at some length, especially focussing on the selection and refinement of the areas of investigation of the Think Tank. Initial list of invitees for the first Think Tank meeting is also given together with an exposition of the criteria applied.

Keywords – EIFFEL Think Tank, Invitation process, Areas of investigation

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PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

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1 Introduction and Overview

This document outlines the plans of the EIFFEL project on the organization of the Think Tank meetings. In general, the EIFFEL Think Tank meetings will revolve around "Grand Challenges" discussions tackled in individual break-out meetings, with senior participants focusing concurrently on more strategic discussion. Input will be solicited in the form of white papers or slide presentations. The first meeting will be opened up also for more junior members of the technical community. The meetings are by invitation only, with the membership of the Think Tank being updated between the meetings following the recommendations of the Think Tank (TT) participants.

As for the meeting outputs, the aim is to compile the first manifesto on strategic issues by the second meeting (Feb.2009), depending on the activity of the TT. The target is to later distil outcomes to a paper, for example an ACM CCR submission. There is also a plan to solicit commitment from the participants for collectively writing a book about the grand challenges (in the style of, for example, "Embedded, Everywhere"), possibly followed by a visionary book of chapters giving a more comprehensible or scenario-oriented view of the topics. There is a need to get a strong commitment from the TT members to support the book activities and the caretakers will work diligently on advocating this approach for participants and will offer full editorial and backoffice support for such an activity. The grand challenges book is the first target and with high priority. The production of these documents, alongside with the associated procedures and policies are described in Deliverable 1.1.

EIFFEL aims also at organizing a separate ("non-TT") meeting for policy makers, regulators etc, planned to take place in Brussels during the first half of 2009. Further such meetings, alongside with meetings and events with other organizations of relevance will be scheduled and arranged later on in a dynamic fashion.

The remainder of this document is organised as follows. In Chapter 2, the initial areas of investigation to be tackled in the Think Tank meetings are discussed. In Chapter 3, the foreseen schedule and locations of the Think Tank meetings are given, and the processes related to the organization and running of the meetings are discussed. In Chapter 4, the principles behind the selection of the initial list of invitees are elaborated, and the initial list of Think Tank members is given. Finally, the document is concluded with a summary and discussion in Chapter 5.

2 Areas of Investigation

Aligned with our Description of Work (DoW), the following areas of investigations and discussions are expected from the EIFFEL Think Tank.

- **Future Architecture** constitutes one of the core areas of EIFFEL, debating and roadmapping the research and development advances in the domain of the architecture as well as architectural principles and models. It is even expected that full debate on the issue of what the term “architecture” means will be generated. The discussion is expected to cover a wide domain of issues including theoretical and practical issues such as migration, interoperability, complexity of architectures, but also societal and economical boundary conditions.
- **Infrastructure** discussions are expected to attract experts that can provide more detailed views on the operational and protocol issues, especially based on the current understanding of network operations and related concerns. Issues such as Internet routing system scalability, stability and quality, operational management, convergence between wireless and wireline communications, would belong to this area. It is also expected that this area may require to occasionally spinout a specific area, such as wireless and mobile infrastructure, to study special needs and challenges in that domain.
- **Security, Privacy and Rules Enforcement** is one of the key areas on providing overarching understanding on these issues. It should be noted that it is not expected to work only in the technological domain, but to consider also social, economical, legal and law-enforcement issues.
- **Emerging Paradigms and Technologies** will be handling the link towards the foundational, fundamental and emerging research issues that may have disruptive or high impact on the EIFFEL domain. This includes issues such as cognitive network technologies, applications of AI/data mining/cognition in the networking domain, application of gaming theory, biology inspired models (e.g. virology, genetic), new unexpected services, etc.
- **Governance and Policy aspects** is one of the novelties of EIFFEL. This area is charged to bring into the EIFFEL Think Tank a strong knowledge on the governance and policy aspects related to networking. So far the governance issues have not been taken into account seriously enough by the technical community, or even by the policy makers in Europe. However, as the network is becoming a critical part of our society and is globally interlinking a large part of the world’s population, the governance and international regulation are becoming important issues. EIFFEL is very aware of this situation and intends to start a successful interdisciplinary debate between different area experts on what needs to be done.
- **Societal, Sociological and Economical aspects** will be handling a number of issues that are related to the changes and challenges in the society and economics domain that are emerging from the global network perspective.
- **Environmental aspects** are expected to be a cross-focus in many discussions. Although not traditionally tackled in the networking community, we fully expect that this domain will spontaneously rise to be a topic in TT meetings. The increased awareness for environmental metrics in designing systems and solutions makes a wider understanding necessary. Feeding into the relevant areas with the most expected environmental impact will be crucial.

Given the methodology of EIFFEL, as illustrated in the lifecycle of the SA, it is however expected that these areas will be subject to re-evaluation and undergo continuous evolution, driven by the TT meetings themselves. Hence, the areas presented above must not be seen as a fixed governance structure of the EIFFEL TT. The EIFFEL caretakers are fully committed to their role as facilitators, and will give the floor to dynamic and democratic evolution of discussion topics during the meetings as long as that will not disrupt the main goal of generating consensus discussions on grand challenges and research trajectories.

3 Think Tank meetings

Schedule, Venues, Themes

The current time-plan for the five Think Tank meetings together with their primary objectives is the following. The locations are preliminarily fixed to following:

0th "Think Tank" meeting: Bled **31 March – 2 April 2008**

Although the Future Internet Meeting in Bled was not an actual Think Tank meeting, the EIFFEL consortium was using this venue as an important spring-board to make its goals known by the community-at-large. Moreover very useful feedback and suggestions on participants were received through the Bled meeting. Furthermore, due to travel constraints of many people it was deemed that having two meetings back-to-back in Bled would have decreased participation both for the EIFFEL TT and the Future Internet meeting by unnecessarily splitting the audience.

1st Think Tank meeting: Venue: Frankfurt-Langen, Germany. **30 September - 1 October 2008**

As this will be the kick-off Think Tank, it is expected to get the debate on identifying the critical steps towards determining the future architecture directions. The meeting will begin with initial views from high-level experts and their opinions on what needs to be done most critically.

There will be two days of discussion and, hopefully some conclusions on the critical issues. This result will be disseminated in the future Internet research domain with the additional objective of increasing the visibility of the innovative work carried out in Europe.

2nd Think Tank meeting: Venue: London, England. **February 2009**

This EIFFEL meeting will cover the most critical issues identified at the kick-off discussions, and in addition will address some dedicated topics and issues. We expect that at least privacy, governance and scalability related issues will be on the agenda, as well as the architectural issues.

3rd Think Tank meeting: Venue: Athens, Greece. **September 2009**

The Athens Manifesto is expected to give a first statement on the state of the art in the architecture and overall networking research domain, as this is the time when many of the international research initiatives would have had enough time to show where they are heading.

4th Think Tank meeting: Venue: Heidelberg, Germany **Jan 2010**

This meeting will have socio-economical and governance related issues as the focus of its agenda. Technical considerations on the Future Internet architecture and its underlying principles will be discussed more in this meeting.

5th Think Tank meeting
May 2010

This meeting will produce the final versions of the **EIFFEL Research and Architecture manifestos** that will provide consensus assessments, summarizing the expert groups' opinion on what research, development, technology and policy work is to be performed in order to meet these challenges.

Membership

The participation to the meetings is by invitation. The initial list of invitees is given in Chapter 4, together with a discussion of the criteria used to compile the list. The membership of the Think Tank or the evolution of the invitee list will be guided later on by the meeting outcomes. The primary selection criteria is to obtain the best people to each of the Think Tank meetings aligned with the areas of investigation pursued in that meeting. The presently foreseen areas were discussed in Chapter 2, but this list is also subject to change following the outcomes of the Think Tank meetings. Selection of TT participants is also done in such a way that cross-fertilization among areas can be easily stimulated.

The invitation process itself is driven by the EIFFEL office. For each meeting a call for participation is drafted and placed on the EIFFEL Web site. The CFP outlines the objectives and the structure of the meeting and will be referenced in the invitation letters sent to the potential participants. The EIFFEL office also runs a registration process which keeps track of the expected participation level and issues additional invitations if required. The CFP will also indicate the types of inputs solicited for the meetings, including presentations on key issues, white papers or contributions to the documents being prepared by the Think Tank or any established working group therein. A preliminary agenda is also drafted for each meeting, although considerable degree of flexibility is retained to ensure that the participants have the opportunity to influence the course of the meeting.

The assigned ("closest") project partner (caretaker) is the main local organizer for each TT meeting and will cover most of the costs from their budget allocation. For some general costs there are also allocations in the budget of Eurescom (EIFFEL office) and the coordinator. The meetings themselves are organized typically at conference hotels or similar locations, which ensures that the participants could have their accommodation in the same location as the TT meeting. This not only increases efficiency, but also lowers costs and makes meetings more attractive for the participants.

Practical arrangements for the meetings are run by the EIFFEL office and the local organizer. This involves the reservation of the meeting place together with the accommodation and all other usual practical matters. As for running the meetings themselves, resources from the caretakers but also selected individuals and initiatives will be utilized. For each meeting a comprehensive report will be written, with the caretakers providing the necessary effort to produce these reports using the tools made available by the EIFFEL office for their promotion. Caretakers will ensure that these reports are representative of the meeting results/outcomes. In addition to stimulating discussions, the caretakers will also maintain meeting reports as a means of communication among various actors, participants and their respective contributions. This way, the global outcome will represent more than the sum of individual contributions (cross-fertilization) and will (possibly) lead to common viewpoints and recommendations from meeting participants (by stimulating consensus during the write-up phase). Caretakers will also support any effort that may result from this dynamic process by leading participants to provide their best understanding as recognized experts on the vision and trajectories for the future architecture, the latest advances in the corresponding research field and the major technical, but also societal, economical, regulatory/policy/governance/etc. challenges to be met. However, it should be noted that although project partners (caretakers) will stimulate and animate

meeting debates and will do their best to ensure effective discussion, they will not force or try to influence outcomes, but will attempt to realize consensus. The caretakers' role is to facilitate the meetings and to remain impartial rapporteurs (unless technical members from the caretakers organizations are invited to the debate, in which case they will not have any stronger role than any other participant). More details on the production of outcomes from the meetings are given in Deliverable D1.1.

The basic cost-structure for a meeting is that the EIFFEL SA will cover the meeting venue and running costs (including catering for lunches, coffee breaks etc.). The project will make available a limited number of travel grants for the Think Tank members to sustain their travel and hotel accommodation costs. However, these funds will be allocated on the basis of members asking support; the caretakers will not offer outright support to anyone – exceptions might be for some keynote speakers or other crucial members of single TT meetings. This approach has been chosen in order to keep costs reasonable and also to ensure that many participants demonstrate a high level of commitment through their own (partial) funding.

Structure of the meetings

The general structure of the meetings will be a duration from two to a maximum of three working days. Typically the TT meeting is expected to start with a brief status update from the EIFFEL consortium, also briefing the participants on the main goals of the particular meeting. The first day will also include concise but debate provoking presentations from selected participants, which might also be supported by white papers or posters. After the presentations, a good part of the meeting will be used in "working mode." This will include debates in full plenary, in which cases the discussion will be moderated by one of the caretakers, or one of the participants selected for that role. Another part (perhaps 50% of the time) will be used in small breakout sessions. The breakout sessions will reflect our selected technical discussion areas. However, the number of breakout sessions will be kept small in order to maintain a critical mass in each of the groups. Each breakout session will have its own rapporteur, and they, together with the caretakers, will be responsible for drafting manifestos and possible roadmap documents from the meetings.

Finally, an informal programme during the evening will be planned so that lively discussions and debates can continue until late.

4 Initial List of Invitees

The initial list of invitees to the *first* Think Tank meeting has been compiled after careful deliberations of the caretakers. The members represent a balance between senior members of the networking community and researchers in earlier phases of their careers. We have sought to select individuals with strong expertise and knowledge on architectural level issues and thinking combined with an outstanding track record and proven capabilities to effectively contribute to discussions in a Think Tank setting. The list also represents a balance between academic participants and those with industry background.

Invitees from Europe

Saleem Bhatti, St. Andrews College (<http://www.cs.st-andrews.ac.uk/~saleem/>)
Frank Stajano, Cambridge University (<http://www.cl.cam.ac.uk/~fms27/>)
Andy Hopper, Cambridge University (<http://www.cl.cam.ac.uk/research/dtg/~ah12/>)
Jon Crowcroft, Cambridge University (<http://www.cl.cam.ac.uk/~jac22/>)
Serge Fdida, LIP6 (<http://www-rp.lip6.fr/~sf/>)
Peter Kirstein, UCLondon (<http://www.cs.ucl.ac.uk/staff/p.kirstein/>)
Mark Handley, UCLondon (<http://www.cs.ucl.ac.uk/staff/M.Handley/>)
Bob Briscoe, BT (<http://www.cs.ucl.ac.uk/staff/bbriscoe/>)
Costas Courcoubetis, AUEB (<http://www.aueb.gr/Users/courcou/>)
Jean-Yves Le Boudec, EPFL (<http://people.epfl.ch/jean-yves.leboudec>)
Cyril Gavoille, University of Bordeaux (<http://dept-info.labri.fr/~gavoille/>)
Bernhard Collini-Nocker, University of Salzburg
(<http://www.scicomp.sbg.ac.at/staff/bernhard.collini-nocker.html>)
Frank Reichert, University of Agder
Anja Feldmann, Technical University of Berlin (<http://www.net.t-labs.tu-berlin.de/people/anja.shtml>)
Jörg Ott, Helsinki University of Technology (<http://www.netlab.hut.fi/~jo/>)
Andrei Gurtov, University of Helsinki (<http://www.cs.helsinki.fi/u/gurtov/>)
Gerald Maguire, KTH (<http://web.it.kth.se/~maguire/>)
Timothy Roscoe, ETH Zurich (<http://people.inf.ethz.ch/troscoe/>)
Thorsten Herfet, Saarland University (<http://www.nt.uni-saarland.de/people/herfet/>)
Paulo Mendes, INESC Porto
Willie Donnelly, TSSG Ireland (<http://www.tssg.org/people/wdonnelly/>)
Rui L.A. Aguiar, Universidade de Aveiro
Gerard Parr, Ulster (<http://www2.ulster.ac.uk/staff/gp.parr.html>)
Jim Roberts, France Telecom (perso.rd.francetelecom.fr/roberts/)
Prosper Chemouil, Orange
Pablo Rodriguez, Telefonica R&D

Invitees from outside Europe

David Clark, MIT (<http://www.csail.mit.edu/biographies/PI/bioprint.php?PeopleID=7>)
Karen Sollins, MIT (<http://www.csail.mit.edu/biographies/PI/bioprint.php?PeopleID=54>)
Randy Katz, UC Berkeley (<http://bnrg.eecs.berkeley.edu/~randy/>)
Scott Shenker, UC Berkeley (<http://www.eecs.berkeley.edu/Faculty/Homepages/shenker.html>)
Christos Papadimitriou, UC Berkeley (<http://www.cs.berkeley.edu/~christos/>)
Anthony Joseph, UC Berkeley (<http://bnrg.cs.berkeley.edu/~adj/>)
Scott Kirkpatrick, HU Jerusalem (<http://www.cs.huji.ac.il/~kirk/>)
Ramesh Rao, UCSD (<http://cwc.ucsd.edu/~rao>)

Jim Kurose, U.Mass (<http://gaia.cs.umass.edu/personnel/kurose.html>)
Walter Willinger, ATT (<http://www.research.att.com/viewPage.cfm?PageID=86>)
Nick McKeown, Stanford (<http://www.stanford.edu/~nickm/>)
KC Claffy, CAIDA/UCSD (<http://www.caida.org/~kc/>)
Dimitri Krioukov, CAIDA/UCSD (<http://www.caida.org/~dima/>)
Geoff Huston, APNIC (<http://www.potaroo.net/>)
John Doyle, CalTech (<http://www.cds.caltech.edu/~doyle>)
Steven Low, CalTech (<http://netlab.caltech.edu/slow/>)
Jörg Liebeherr, University of Toronto (<http://www.comm.utoronto.ca/~jorg/>)
Kevin Fall, Intel Research Berkeley (<http://www.cs.berkeley.edu/~kfall>)
Lixia Zhang, UCLA (<http://www.cs.ucla.edu/~lixia/>)
Sally Floyd, ICIR (<http://www.icir.org/floyd/>)
Marc Allman, ICIR (<http://www.icir.org/mallman/>)
Randy Bush, IJ (<http://www.psg.com/~randy/>)
Henning Schulzrinne, Columbia (<http://www.cs.columbia.edu/~hgs/>)
Nick Feamster, GaTech (<http://www.cc.gatech.edu/~feamster/>)
Roch Guerin, U.Penn (<http://www.seas.upenn.edu/~guerin/>)

5 Conclusions

In this document, we have outlined the organization and plans of the EIFFEL Think Tank meetings together with the initial invitee list. The technical work of the Think Tank will in part be self-organizing, although an initial list of the areas of investigation has been designed by the caretakers as a preparation and input for the first meeting. Through a selective invitation process, guided brainstorming and debate and dynamic establishment of smaller working groups or teams to identify and address the “grand challenges” of the future networked society, EIFFEL seeks to produce structured vision trajectories (investigation on potential r/evolutionary scenarios) and vision roadmaps that will not only include technical but also policy / regulatory requirements. The collective outputs of the Think Tank meetings will be made available to the public through different types of documents, ranging from research manifestos to position papers and potentially jointly authored booklets on key research challenges. The careful selection and subsequent refinement of the participants plays a key role in the success of these activities, and the caretakers believe that the initial list given in this document strikes the right balance between revolutionary and evolutionary viewpoints, and academic / industrial representation. The organization of the first Think Tank is well underway, and the related outcomes and refinements to the plans presented here will be subjects of further documents from the project.

Appendix 1: CFP for the First Think Tank meeting

Call for Participation

1st EIFFEL Think Tank Meeting

30.09 - 01.10.2008

Frankfurt-Langen, Germany <http://www.fp7-eiffel.eu>

Background

The EIFFEL project is mobilizing researchers and experts in Europe and beyond to debate and confront ideas and positions on the future of the Internet and its (r)evolution towards the development of the Future Networked Society.

For this purpose, the EIFFEL project is setting up a pan-European discussion forum and technical Think Tank on enabling conflict-free, talented and scientifically oriented discussions around the future of the Internet.

Its overall objective is to provide a place for discussing and exchanging ideas and research trajectories on the future of the Internet architecture and governance building and to publish the conclusions of these discussions.

Aim and Scope

The EIFFEL Think Tank is the main tool for stimulating debate among experts. It targets top-level researchers from all over the world to come together in order to discuss the status and directions of Future Internet research and identify the key issues where significant energy and effort needs to be directed. The conclusions of the Think tank will form an input to the research agendas in the European research programmes, National research programmes in and the various European technology Platforms related to the Future Internet research.

It is expected that the scope and direction of discussions will be defined by the participants' positions and the degrees of consensus we can form on the key challenges.

Call for contributions

The Think Tank meeting solicits submissions of original and controversial contributions, aimed for debate with the fellow researchers at the meeting. The first Think Tank meeting will debate widely research opportunities and challenges in the field. One of the aims is to understand what are the real problems in current networks; we expect serious debate on whether new architectural principles are required.

Accordingly all invited participants are now invited to prepare a short elaboration of their view on what the key challenges - one or two PowerPoint slides would be ideal.

These contributions are intended to give guidance to the discussions by identifying topics and issues of high interest and working out their relevance to the community. The results of this discussion will

form the agendas for any break out sessions in the first Think Tank meeting and the agendas for the future Eiffel Think Tank meetings.

Given that this is the first meeting of the EIFFEL Think Tank, we ask contributors to focus on the need for change and the ways to achieve this change.

More concretely, answers to questions like 'Do we really need change?' 'What is the evidence?' are of interest.

Another potential focus of our discussion could revolve around (but is not intended to be limited to) the role of clean slate in pushing the development of new architectural principles. What is our understanding of the term clean slate? Is it just hype (i.e., a way to get research funding)? Or a serious approach to use design methodologies that can help us unearth some of the new ways of thinking, potentially required to push us forward? Or, is it an unrealistic goal of deploying new solutions without knowing if it is for the better or worse?

Expected Results

The intended outcomes of these meetings are position papers on issues identified in the meetings, manifestos on architectural directions and generally recommendations on steps forward.

The position papers and manifestos are to be freely usable by the participants and will be widely disseminated. We encourage people to disseminate them towards other interested bodies, e.g., National and/or Regional funding agencies.

One of the longer term goals (using the output of the Think Tanks) is also to give reasoned rationale and recommendations on the research needs in the field by collectively producing a full book-length document.

All participants are asked to note that all contributions will be put in the public discussion space of the EIFFEL project and published by the EIFFEL project as part of the event report. Participation and the provision of a contribution is explicitly understood as giving your agreement to the publication of your contributed material by the EIFFEL project.

Format of the Think Tank

The first Think Tank meeting is intended to widely debate research opportunities and challenges which we are facing. The topics are not particularly limited. Participants are encouraged to suggest small 10 (max. 15) minutes preparatory talks to the organizers. The main part of the meeting is dedicated to open technical debate to try and get a feel for the importance of issues and which ones need to be addressed immediately. This can include a debate on the future topics for the second and subsequent meetings. Breakout groups will be used if the number of key topics and the interests of the participants justifies them.

An important part of the Think Tank will be a final session where the agreed conclusions and priorities will be summarised and authorised by the participants.

Participation by invitation

Participation in Eiffel Think Tank meetings is by invitation only. The participants are selected through the recognition of the contribution they are making to the development of the future networked society and their active role in any of the relevant research communities.

Important date for confirming participation

As the number of participants in this event is limited, we ask you to confirm your participation as soon as possible. In any case please let us know your intentions before July 30, 2008 so we can reallocate the place if you are unavailable.

1st EIFFEL Think Tank meeting: September 30 & October 1, 2008 Hotel Steinberger, Frankfurt-Langen