Work And Budget Plan

IC1304 Grant Agreement Period 2
02/12/2014 to 31/12/2015

Section I: Action Profile

Action General Information

Action Code	IC1304	MC Chair	Prof Rob van der Mei
Action Title	IC1304 - Autonomous Control for a Reliable Internet of Services (ACROSS)		
MOU	024/13	Draft MOU	oc-2012-2-13738
CSO Approval Date	2013-05-16		
Action Start Date	2013-11-14	Action End Date	2017-11-13
Science Officer	Dr Ralph Stuebner	Administrative Officer	Mr Matthias Kahlenborn

Participating COST Member Countries and Cooperating State:

	ITC		Non-ITC		Total
Cost Countries having accepted the MOU	Number	14	Number	16	30
	% of all ITCs	46.67%	% of all non-ITCs	53.33%	
Number of MC Members	26		30		56

Country and Acceptance Date		
AT 18/07/2013	HU 19/07/2013	RO 24/07/2013
BE 03/02/2014	IE 02/07/2013	RS 29/08/2013
BG 08/08/2013	IL 23/06/2013	SK 08/08/2013
HR 14/06/2013	IT 11/07/2013	SI 01/07/2014
CY 22/10/2013	LT 08/04/2014	ES 29/05/2013
DK 01/08/2013	MT 03/11/2013	SE 11/11/2013
FI 17/06/2013	NL 06/06/2013	CH 05/09/2013
FR 30/09/2013	NO 21/10/2013	TR 01/07/2014
DE 28/06/2013	PL 01/07/2013	UK 03/06/2013
EL 11/10/2013	PT 16/09/2013	MK 10/07/2013

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International cooperation

	NNC	IPC	Specific Organisation	Total
Number of entities formally approved to join Action	0	0	0	0
Number of countries	0	0	0	0

Working Groups

	WG Title	WG Leader	Number of Members
WG1	Autonomous management and real-time control	Dr Philipp Leitner	40
WG2	Methods and tools for monitoring and service prediction	Dr Yoram Haddad	40
WG3	Smart pricing and competition in many-domain systems	Dr Peter B. Key	8

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Section II: MoU objectives and Grant Agreement Period Goals and Activities

Action Objectives from MoU

Aim/primary Objective	The main objective of the Action is to create a European network of experts, from bothacademia and industry, aiming at the development of autonomous control methods for areliable and quality-aware Internet of Services.
Secondary objectives	• Establishment of a platform to fuel and coordinate research collaborations throughout Europe in the field of reliability, robustness and quality-aware management and control of Internet-based service infrastructures to overcome the current knowledge segmentation. • Development of algorithms for autonomous decision and control regarding service composition, resource allocation and user demand in the IoS, in order to ensure service quality and reliability. • Development of scalable methods and tools for system monitoring & analysis to support autonomous decision and control. • Development of rules and smart pricing schemes in multi-domain, highly competitive service environments (possibly based on game theory and self-organization principles) providing proper incentives to establish an economically viable ecosystem.

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Grant Agreement Period

Grant Agreement Period Start Date	02/12/2014	Grant Agreement Period End Date	31/12/2015

Grant Agreement Period Goals

Number	Grant Agreement Period Goal	MoU Objective(s) it relates to
GAPG 1	Continue bringing together researchers and industry, and explore new topics	Aim/Primary objective Secondary objective 1
GAPG 2	Expand the IC1304 community, particularly to include more involvement from industry	Aim/Primary objective Secondary objective 1
GAPG 3	Improve existing methods for autonomous control for the IoS	Secondary objective 2
GAPG 4	Improve existing methods for QoS/QoE monitoring and prediction in the IoS	Secondary objective 3
GAPG 5	Improve existing models and methods for pricing in the IoS	Secondary objective 4
GAPG 6	Compile a repository of publications	Aim/Primary objective Secondary objective 1 Secondary objective 2
GAPG 7	Train young researcher in broad aspects of quality control and reliability in the IoS	Aim/Primary objective Secondary objective 1 Secondary objective 2 Secondary objective 3 Secondary objective 4
GAPG 8	Stimulate further involvement of female researchers in order to improve gender balance	Aim/Primary objective Secondary objective 1
GAPG 9	Stimulate further involvement of early-stage researchers	Aim/Primary objective Secondary objective 1

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Section IV: Work and Budget Plan for the Grant Agreement Period

Work and Budget Plan Summary

A. COST Networking Tools	EUR
(1)Meetings	92,985.00
(2)Training Schools	27,600.00
(3)STSMs	25,000.00
(4)Dissemination	1,500.00
(5)Other Expenses Related to Scientific Activities	500.00
B. Total Science Expenditure(sum of(1) to (5))	147,585.00
C. FSAC(max. of 15% of B)	22,137.75
D. Total Expenditure(B+C)	169,722.75

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Meetings

Overview

Meeting Title	Meeting Type	Dates	Location	ITC	Total Cost(EUR)
3rd MC + WG1-3 meeting + 1st Open Workshop on “Autonomous Control in the Internet of Services”	Management Committee Meeting, Core Group Meeting, Working Group Meeting, Workshops/Conferences	15/04/2015 - 17/04/2015	Würzburg (Germany)	No	43,565.00
2nd Open workshop on "Autonomous Control for the IoS"	Workshops/Conferences	02/07/2015 - 02/07/2015	Paris (France)	No	6,780.00
3rd Open Workshop on “Autonomous Control in the Internet of Services”	Workshops/Conferences	11/09/2015 - 11/09/2015	Ghent (Belgium)	No	5,400.00
4th MC + WG1-3 meeting	Management Committee Meeting, Core Group Meeting, Working Group Meeting	08/10/2015 - 09/10/2015	Lovran (Croatia)	Yes	37,240.00
				Total	92,985.00

Details

Meeting Type	Management Committee Meeting,Core Group Meeting,Working Group Meeting,Workshops/Conferences
Title of the Meeting	3rd MC + WG1-3 meeting + 1st Open Workshop on “Autonomous Control in the Internet of Services”
Grant Period Goal(s) it will address	Continue bringing together researchers and industry, and explore new topics,Expand the IC1304 community, particularly to include more involvement from industry,Improve existing methods for autonomous control for the IoS,Improve existing methods for QoS/QoE monitoring and prediction in the IoS,Improve existing models and methods for pricing in the IoS,Train young researcher in broad aspects of quality control and reliability in the IoS,Stimulate further involvement of female researchers in order to improve gender balance,Stimulate further involvement of early-stage researchers
Description	During the 3rd MC-meeting, the Summer School will be evaluated, and the administrative and organization matters will be discussed. During the WG1-3 meeting, progress updates will be given for each of the task forces. Moreover, IBM researchers have been invited to give a half-day lecture about IBM's view of quality control in the IoS. For the workshop, several speakers from outside will

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	be invited to give presentations, particularly with expertise in network virtualization and SDN. Moreover, talks will be given by ACROSS participants. This meeting is co-located to the ACROSS Summer School on network virtualization and software-defined networks, and makes use of the presence of the participants (mainly ESRs) of the Summer School. Since the workshop is also co-located to the 3rd MC and WG1-3 meetings (see above), it will benefit from the presence of other ACROSS participants.		
Output(s)	Tangible output: 1. 1st scientific progress report 2. Presentation slides made available via the public Website 3. Publication repository up and running		
Location	Würzburg (Germany)	ITC	No
Start Date	2015-04-15 09:00:00	End Date	2015-04-17 18:00:00
Duration	3 days		
Number of expected total participants	45	Number of participants to be reimbursed from COST funds	45
Average reimbursement(per participant)(EUR)	857.00	Total Reimbursement costs (EUR)	38,565.00
Local Organiser Support (EUR)	5,000.00		
Total cost of the meeting (EUR)	43,565.00		

Meeting Type	Workshops/Conferences		
Title of the Meeting	2nd Open workshop on "Autonomous Control for the IoS"		
Grant Period Goal(s) it will address	Continue bringing together researchers and industry, and explore new topics,Expand the IC1304 community, particularly to include more involvement from industry,Improve existing methods for autonomous control for the IoS,Improve existing methods for QoS/QoE monitoring and prediction in the IoS,Improve existing models and methods for pricing in the IoS,Train young researcher in broad aspects of quality control and reliability in the IoS,Stimulate further involvement of female researchers in order to improve gender balance,Stimulate further involvement of early-stage researchers		
Description	This workshop is co-located to the EUCNC-meeting. Website is "http://www.eucnc.eu/". We will invite 1 or 2 subject-matter experts to give presentations about their work on quality control in the IoS. In addition, ACROSS participants will be asked to give presentations during the workshop. The workshop will be open to people from outside. Due to budget limitations, only presenters will be reimbursed.		
Output(s)	1. Presentation slides made available via public Website		
Location	Paris (France)	ITC	No
Start Date	2015-07-02 08:00:00	End Date	2015-07-02 18:00:00
Duration	1 day		
Number of expected total participants	25	Number of participants to be reimbursed from COST funds	8

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Average reimbursement(per participant)(EUR)	660.00	Total Reimbursement costs (EUR)	5,280.00
Local Organiser Support (EUR)	1,500.00		
Total cost of the meeting (EUR)	6,780.00		

Meeting Type	Workshops/Conferences		
Title of the Meeting	3rd Open Workshop on “Autonomous Control in the Internet of Services”		
Grant Period Goal(s) it will address	Continue bringing together researchers and industry, and explore new topics,Expand the IC1304 community, particularly to include more involvement from industry,Improve existing methods for autonomous control for the IoS,Improve existing methods for QoS/QoE monitoring and prediction in the IoS,Improve existing models and methods for pricing in the IoS		
Description	The workshop is co-located to the 27th International Teletraffic Congress (ITC27), a well-known international conference on performance modeling and engineering of communication networks. The Website of ITC 27 is ""http://www.itc27.org/call-for-papers/. We plan to invite 1 or 2 speakers from outside, with a specific expertise in performance engineering aspects. Moreover, ACROSS participants will be asked to give presentations about their work to disseminate the research results (preferably ESRs and female researchers). Coverage of expenses will only be provided to speakers at the workshop.		
Output(s)	Tangible output: Presentation slides available via the public Website		
Location	Ghent (Belgium)	ITC	No
Start Date	2015-09-11 09:00:00	End Date	2015-09-11 18:00:00
Duration	1 day		
Number of expected total participants	25	Number of participants to be reimbursed from COST funds	8
Average reimbursement(per participant)(EUR)	550.00	Total Reimbursement costs (EUR)	4,400.00
Local Organiser Support (EUR)	1,000.00		
Total cost of the meeting (EUR)	5,400.00		

Meeting Type	Management Committee Meeting,Core Group Meeting,Working Group Meeting
Title of the Meeting	4th MC + WG1-3 meeting
Grant Period Goal(s) it will address	Continue bringing together researchers and industry, and explore new topics,Expand the IC1304 community, particularly to include more involvement from industry,Improve existing methods for autonomous control for the IoS,Improve existing methods for QoS/QoE monitoring and prediction in the IoS,Improve existing models and methods for pricing in the IoS,Stimulate further involvement of female researchers in order to improve gender balance,Stimulate

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	further involvement of early-stage researchers		
Description	During the 4th MC-meeting, we will (1) re-evaluate the progress of the research tasks, and (2) prepare the Annual Report Y2 and W&BP Y3. For the 4th WG1-3 meeting, we will invite 1 or 2 external speakers to share their view on quality aspects on the IoS (with a preference for ESRs and female researchers). In doing so, we will also invite 1 or 2 members of the Industrial Forum to share their thoughts and vision on the IoS.		
Output(s)	Tangible output: 1. 2nd Scientific progress report 2. Scientific plan for Y3		
Location	Lovran (Croatia)	ITC	Yes
Start Date	2015-10-08 09:00:00	End Date	2015-10-09 18:00:00
Duration	2 days		
Number of expected total participants	45	Number of participants to be reimbursed from COST funds	45
Average reimbursement(per participant)(EUR)	772.00	Total Reimbursement costs (EUR)	34,740.00
Local Organiser Support (EUR)	2,500.00		
Total cost of the meeting (EUR)	37,240.00		

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Training School

Overview

Title of the Training School	Dates	Location	ITC	Total Cost(EUR)
Training school "Network Function Virtualization meets Big Data: Architecture and Performance Evaluation”	08/04/2015 - 14/04/2015	Würzburg (Germany)	No	27,600.00
			Total	27,600.00

Details

Title of the Training School	Training school "Network Function Virtualization meets Big Data: Architecture and Performance Evaluation”		
Grant Period Goal(s) it will address	Continue bringing together researchers and industry, and explore new topics,Expand the IC1304 community, particularly to include more involvement from industry,Improve existing methods for autonomous control for the IoS,Improve existing methods for QoS/QoE monitoring and prediction in the IoS,Improve existing models and methods for pricing in the IoS,Train young researcher in broad aspects of quality control and reliability in the IoS,Stimulate further involvement of female researchers in order to improve gender balance,Stimulate further involvement of early-stage researchers		
Description	This training school is aimed at acquiring and sharing knowledge about Network Virtualization and Software-Defined Networks, which are among the key topics in the context of the Internet of Services. For the Training School several speakers from outside are invited to give lectures, and several lectures will be taught by the ACROSS participants (negotiations are ongoing). The training school will be open to Master and Ph.D. students, as well as other ACROSS participants. The Website is "http://summerschool2015.informatik.uni-wuerzburg.de". The event is co-located to several other ACROSS-activities (MC, 1st Open workshop) that will be held right after the Training School. In this way, the TS may benefit from the presence of ACROSS-participants.		
Output(s)	Tangible output: Course slides made available via the public Website.		
Location	Würzburg (Germany)	ITC	No
Start Date	2015-04-08 00:00:00	End Date	2015-04-14 00:00:00
Number of trainers	8	Number of trainees	50
Number of trainers to be reimbursed	5	Number of trainees to be reimbursed	28
Average trainer Reimbursement(EUR)	1,100.00	Average reimbursement per trainee(EUR)	700.00
Total trainer Reimbursement(EUR)	5,500.00	Total trainee Grant(EUR)	19,600.00
Local Organiser Support (EUR)	2,500.00		
Total cost of the Training	27,600.00		

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School(EUR)	

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STSM

Number	10
Average cost per STSM(EUR)	2,500.00
Total cost(EUR)	25,000.00

How will the STSMs contribute to the achievement of the Grant Period Goals?
Expand the IC1304 community, particularly to include more involvement from industry,Train young researcher in broad aspects of quality control and reliability in the IoS,Stimulate further involvement of early-stage researchers Short Term Scientific Missions The concrete goal of the 10 planned STSM's are to stimulate scientific collaborations between participating countries. The STSM's are also aimed at realizing publications and to disseminate the scientific results to the larger community.

Disseminations

Title	Type	Publisher/provider	Expected date of Release	Cost(EUR)
Expansion of action webpage	Action Website	CWI	01/04/2015	1,500.00

How will this Dissemination contribute to the achievement of the Grant Period Goals?	
Continue bringing together researchers and industry, and explore new topics,Expand the IC1304 community, particularly to include more involvement from industry	
Total Disseminations	1,500.00

OERSA

Item	Cost(EUR)
Bank charges	500.00

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