

# TC14: Entertainment Computing

## Report to General Assembly and Technical Assembly Amsterdam, The Netherland, September 27 - 29, 2012

**Ryohei Nakatsu, TC14 Chair**

### Part 1: General Assembly (Amsterdam, The Netherland)

#### TC14 Entertainment Computing

[<http://www.org.id.tue.nl/IFIP-TC14/>]

#### 1. TC14 meetings held since last report

##### 1.1 Twelfth meeting

The twelfth TC14 business meeting took place on 1st July 2012 at Bremen in Germany. Below are the list of the participants and the agenda.

#### TC officers:

Ryohei NAKATSU	(National University of Singapore, SG, Chair)
Matthias RAUTERBERG	(Eindhoven University of Technology, NL, Vice-chair)
Tim MARSH	(James Cook University, AU, Secretary)*

#### National Representatives:

Australia	AU	Tim MARSH (proxy, Senior Lecturer, James Cook Univ.)*
Brazil	BR	Esteban CLUA (Universidade Federal Fluminense)
Canada	CA	Sidney FELS (Univ. of British Columbia)*
China	CH	Zhigeng PAN (Zhejiang Univ.)
Czech Republic	CZ	David OBDRZALEK (Charles Univ.)*
France	FR	Stephane NATKIN (CNAM/ENJMIN)
Germany	DE	Rainer MALAKA (Univ. of Bremen)
Italy	IT	Paolo CIANCARINI (Univ. of Bologna)
Japan	JP	Naoko TOSA (proxy for Junichi Hoshino)
Korea	KR	Hyun YANG (KAIST)*
Netherlands	NL	Matthias RAUTERBERG (Eindhoven Univ. of Technology)
Singapore	SG	Henry DUH (National Univ. of Singapore)*
Poland	PL	Dominik RYZKO (proxy to Piotr Gawrysiak)
Portugal	PT	Nuno CORREIA (New Univ. of Lisbon)*

#### Absent Excused:

Spain	SP	Pedro GONZALEZ CALERO (Complutense Univ. of Madrid)
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**WG chairs:**

WG14.2 Chair: David OBDRZALEK (Charles Univ.)\*

WG14.3 Chair: Matthias RAUTERBERG (Eindhoven Univ. of Technology, The Netherlands)

WG14.6 Chair: Lyn PEMBERTON (University of Brighton, UK)

WG14.7 Chair: Naoko TOSA (Kyoto University, Japan)

**Honorary Members:**

Nahum GERSHON (The Mitre Corporation, US)\*

**Observers:**

Erik van der SPEK (Eindhoven Univ. of Technology, The Netherlands)

\*: Attendance by teleconference

**Agenda:**

Approval of the minutes of the previous TC14 meeting

Change of officers and members

Election of TC14 Chair

Progress of ICEC2012 - paper reviews, keynote speakers, banquet and events, workshops

Venue of ICEC2013

Working groups activities

Entertainment Computing Journal

Any other business (AOB)

**2. TC14 meetings scheduled until next IFIP General Assembly**

The 13th TC14 meeting will be held at the time of ICEC2012 (International Conference on Entertainment Computing) that will be held on September 19 - 22, 2012 in Bremen, Germany. Also the 14th TC14 meeting will be held in the spring of 2013.

**3. Changes in membership and officers****3.1 TC14 officers and members**

There have been several changes since the last report to the General Assembly 2011.

**Retirement:**

Don Marinelli representing ACM, US retired from his position at the end of June 2012. Nahum Gershon representing IEEE, US retired from his position at the end of March 2012 as IEEE has stopped to be a full member of IFIP. We are now contacting ACM asking them to nominate a relevant person who takes over Don Marinelli. Based on their long time contribution to IFIP TC14 we have decided to give them the position of honorary member. Adrian Cheok, national representative of Singapore, retired from his position as he moved from National University of Singapore in Singapore to Keio University in Japan at the end of December 2011.

**Replacement and new nomination:**

As a replacement of Adrian Cheok we asked *Singapore* Computer Society the nomination of new member and they nominated Dr. Henry DUH, Associate Professor at National University of Singapore as a new member representing Singapore. As a replacement of Don Marinelli we asked ACM to nominate a new member who would take over him and they nominated Dr. Magy SEIF EL-NASR, Associate Professor at Northeastern University, US as a new member representing ACM.

We have been checking the activity of each member and trying to replace non-active members with proactive new members. We have approached IFIP full member societies in Austria, Bulgaria, Finland, Ireland, and Norway asking them to replace the existing non-active members with new members and these societies nominated new TC14 members representing their countries.

Also we have been eagerly trying to invite new members from countries with no TC14 representatives. Especially we have been discussing with IFIP full member societies representing *Belgium, Brazil, Greece, and Poland* and as a result they nominated new TC14 members representing these countries. Below is the result of our activities for the replacement of members and also the invitation of new members.

**AT** pending Helmut HLAVACS (Prof., University of Vienna, Austria)  
**BE** David GEERTS (Dr., K.U. Leuven, Belgium)  
**BR** Esteban CLUA (A/Prof., Universidade Federal Fluminense, Brazil)  
**BG** Zlatogor MINCHEV (A/Prof., Bulgarian Academy of Sciences, Bulgaria)  
**FI** Artur R. LUGMAYR (Prof., Tempere University of Technology, Finland)  
**GR** Nikitas Sgouros (Prof, University of Piraeus, Greece)  
**IR** Mads HAAHR (A/Prof. Trinity College Dablin, Ireland)  
**MA** pending (proposed: Prof. Shafry Mohd RAHIM, Malaysia)  
**NO** Letizia JACCHERI (Prof., Norwegian Univ. of Science & Technology, Norway)  
**PL** Pioty GAWRYSIAK (Prof., Warsaw University of Technology, Poland)  
**SG** Henry DUH (A/Prof., National University of Singapore, Singapore)  
**SW** pending (proposed: Dr. Bob SUMMER, Switzerland)  
**US** Magy SEIF EL-NASR (A/Prof., Northeastern University, US)

**Next TC14 Chair:**

Present TC14 Chair, Ryohei NAKATSU, Professor at National University of Singapore, has served as TC14 Chair since September 2008. Based on the IFIP bylaws, the maximum duration of the term of each TC chair is 4 years and therefore his term expires at the end of August 2012. Therefore TC14 should elect new TC14 Chair based on IFIP bylaws. We had a election of next TC14 Chair at our TC14 meeting held on 1 June 2012 at Bremen, Germany. As a result of the election, Matthias RAUTERBERG, Professor at Eindhoven University of Technology, The Netherland, was elected as next TC14 Chair. His chairmanship will become effective once this result would be approved at IFIP TA and GA. And at the next TC14 meeting he will nominate new TC14 Vice Chair and Secretary.

**3.2 TC members**

The TC members as of 31st August 2012 are shown below.

**TC officers**

Chair Ryohei NAKATSU (Prof., National University of Singapore)

Vice-chair                    Matthias RAUTERBERG (Prof., Eindhoven Univ. of Technology)  
 Secretary                    Tim MARSH (Dr., National University of Singapore)

National Representative

- |    |                |   |
|----|----------------|---|
| 1  | Austria        | Peter PURGATHOFER (Prof., Vienna University of Technology)        |
| 2  | Belgium        | David GEERTS (Dr., K.U. Leuven)                                   |
| 3  | Brazil         | Esteban CLUA (Assoc Prof., Universidade Federal Fluminense)       |
| 4  | Bulgaria       | Zlatogor MINCHEV (Assoc Prof., Bulgarian Academy of Sciences)     |
| 5  | Canada         | Sidney FELS (Prof., University of British Columbia)               |
| 6  | China          | Zhigeng PAN (Prof., Zhejiang University)                          |
| 7  | Czech          | David OBDRZALEK (Dr., Charles University)                         |
| 8  | Finland        | Ville-Veikko MATTILA (Dr., Nokia Research Center)                 |
| 9  | France         | Stephane NATKIN (Prof., CNAM/ENJMIN)                              |
| 10 | Germany        | Rainer MALAKA (Prof., University of Bremen)                       |
| 11 | Greece         | Nikitas SGOUROS (Prof., University of Piraeus)                    |
| 12 | Hungary        | Barnabas TAKACS (Dr., Hungarian Academy of Sciences)              |
| 13 | Ireland        | Richard REILLY (Prof., University College of Dublin)              |
| 14 | Italy          | Paolo CIANCARINI (Prof., University of Bologna)                   |
| 15 | Japan          | Junichi HOSHINO (Assoc Prof., Tsukuba University)                 |
| 16 | Korea          | Hyun S. YANG (Prof., KAIST)                                       |
| 17 | Netherlands    | Matthias RAUTERBERG (Prof., Technical University of Eindhoven)    |
| 18 | Norway         | Letizia JACCHERI (Prof., Norwegian Univ. of Science & Technology) |
| 19 | Portugal       | Nuno CORREIA (Prof., New University of Lisbon)                    |
| 20 | Singapore      | Henry DUH (Assoc Prof., National University of Singapore)         |
| 21 | Spain          | Pedro GONZALEZ CALERO (Prof., Complutense Univ. of Madrid)        |
| 22 | Thailand       | Natanicha CHORPOTHONG (Dr., Assumption University)                |
| 23 | United Kingdom | Marc CAVAZZ (Prof., University of Teesside)                       |
| 24 | Zambia         | Milner MAKUNI (Mr., Afriswitch PVT Limited)                       |

**WG Officers**

- |               |  |
|---------------|--|
| WG14.1 chair: | Marc CAVAZZA (Prof., University of Teesside)                   |
| WG14.2 chair: | David OBDRZALEK (Prof., Charles University)                    |
| WG14.3 chair: | Matthias RAUTERBERG (Prof., Technical University of Eindhoven) |
| WG14.4 chair: | Stephane NATKIN (Prof., CNAM)                                  |
| WG14.5 chair: | Lynne BAILLE (A/Prof., Glasgow Calendonian University)         |
| WG14.6 chair; | Lyn PEMBERTON (Reader, University of Brighton)                 |
| WG14.7 chair; | Naoko TOSA (Prof., Kyoto University)                           |

**Observers**

- |                       |   |
|-----------------------|---|
| IEEE Computer Science | Miguel ENCARNACAO (Dr., Imedia Inc.)      |
| DiGRA:                | Tony MANNINEN (Prof., University of Oulu) |

**Honorary Members**

- |     |  |
|-----|--|
| JP: | Takehiko KAMAE (Dr., National Institute of Technology)         |
| US  | Don MARINELLI (Dr., Prof Emeritus, Carnegie Mellon University) |
| US  | Nahum GERSHON (Dr., MITRE)                                     |

**4. TC14 conferences held since last report**

#### **4.1 Sponsored events**

##### **4.1.1 ICEC 2011**

The 10th International Conference on Entertainment Computing  
Simon Fraser University, Vancouver, Canada  
October 05 – 08, 2011

General Chairs: Sidney Fels (University of British Columbia, Vancouver, BC, Canada)  
Magy Seif El-Naser (SFU, Vancouver, BC, Canada)

Conference Advisory Committee:

Ryohei Nakatsu, National University of Singapore  
Matthias Rauterberg, Technical University of Eindhoven

Technical Paper Chairs:

Junia Anacleto (Federal University of Sao Carlos, SP, Brasil)  
Nick Graham (Queens University, Kingston, ON, Canada)

#### **4.2 Co-Sponsored events**

##### **4.2.1 Culture and Computing 2011**

The Second International Conference on Culture and Computing  
October 20 – 22, 2011  
Kyoto, Japan

Conference Co-Chairs: Kozaburo Hachimura (Ritsumeikan University, Japan)  
Toru Ishida (Kyoto University, Japan)  
Naoko Tosa (Kyoto University, Japan)

### **5. TC14 conferences to be held**

#### **5.1 Sponsored events**

##### **5.1.1 ICEC2012**

The 11th International Conference on Entertainment Computing (ICEC2012)  
September 26 - 29, 2012  
University of Bremen, Bremen, Germany

General Chair: Rainer Malaka (University of Bremen, Germany)

Conference Advisory Committee:

Ryohei Nakatsu, National University of Singapore  
Matthias Rauterberg, Technical University of Eindhoven

Paper Chair: Maic Masuch, University of Duisburg-Essen

Workshop Chairs:

Lynne Baillie, Glasgow Caledonian University  
Rod McCall, Universitat du Luxembourg

Social Media Chair: Lennart Nacke, University of Ontario Institute of Technology

Organization Committee:

Michael Boronowsky  
Marc Herrlich  
Markus Krause  
Jan Smeddinck  
Gerald Volkmann  
David Wewetzer  
Tanja Woronowicz

## **5.2 Co-sponsored Events**

The following conferences will be held as IFP TC14 co-sponsored events. The details of the conference will be decided soon and appear on their web site.

- 1 EuroITV2013
- 2 Edutainment2013
- 3 ACE2012
- 4 Culture and Computing 2013

## **6. Other TC14 activities**

### **6.1 Conference Proceedings**

The proceedings of ICEC2011 have been published from Springer as one of the LNCS series. The proceedings of ICEC2012 will be published from Springer as one of the LNCS series.

### **6.2 Publications**

In 2009 TC14 and Elsevier started a new International Journal on 'Entertainment Computing'. Contracts have been signed and exchanged between IFIP, IFIP TC14 and Elsevier. Also we have composed a group of Editors-in-Chief, Co-Editors-in-Chief and Associate Editors. Already several issues of the journal have been published.

## **Working Groups**

### **1. WG14.1 Digital Storytelling**

Chair: Marc CAVAZZA (Prof., University of Teesside, UK)

#### **(a) Meetings**

WG14.1 meeting was held during the Fourth International Conference on Interactive Digital Storytelling (ICIDS 2011) that was held in Vancouver, Canada on November 28 – December 01, 2011. Next WG14.1 meeting will be held in Bremen, Germany on September 26-29, 2012 during ICEC2012.

**(b) Members**

Stephane Natkin (FR), Stephane Donikian (FR), Ana Paiva (PT), Nuno Correia (PT), Michael Young (US), Ulrike Spierling (D), Nicolas Szilas (CH), Federico Peinado (ES)

**(c) Events**

Third International Conference on Interactive Digital Storytelling (ICIDS 2011)

Dates: November 28 – December 01, 2011

Venue: Vancouver, Canada

General Chairs: Mei Si, David Thue

Program Chairs: Elisabeth Andre, James Lester

Local Arrangements Chair: Joshua Tanenbaum

Workshops Chair: Voronica Zammitto

**2. WG14.2 Entertainment Robot**

Chair: David OBDRZALEK (Dr., Charles University, Czech)

**(a) Meetings**

WG14.2 meeting was held during EUROBOT 2012. Next WG14.2 meeting will be held in Bremen, Germany on September 26 - 29, 2012 during ICEC2012.

**(b) Events**

EUROBOT 2012

**3. WG14.3 Theoretical Basis of Entertainment**

Chair: Matthias RAUTERBERG (Prof., Eindhoven University of Technology, Netherlands)

**(a) Meetings**

WG14.3 meeting was held in Vancouver, Canada on October 05 - 08, 2011 during ICEC2011 in conjunction with TC14 meeting. Next WG14.3 meeting will be held in Bremen, Germany on September 26 - 29, 2012 during ICEC2012.

**(b) Members**

Matteo Bittanti (ITALY), Johanna Blakley (USA), Brad Bushman (USA), Suely Fragoso (BRAZIL), Jeanne B. Funk (USA), Susan Gold (USA), Haruhiro Katayose (JAPAN), Fátima Lasay (PHILIPPINE), Noriko Nagata (JAPAN), Bary W. Pollack (USA), Matthias Rauterberg (NETHERLANDS), Bill Swartout (USA), Peter Vorderer (USA/GERMANY)

*Observers*: Jason Della Rocca (CANADA), Jeffrey Goldstein (NETHERLANDS)

**(c) Events****4. WG14.4 Games and Entertainment Computing**

Chair: Stephane NATKIN (Prof., CNAM, France)

**(a) Meetings**

WG14.4 meeting was held in Vancouver, Canada on October 05 - 08, 2011 during ICEC2011 in conjunction with TC14 meeting. Next WG14.4 meeting will be held in Bremen, Germany on September 26 - 29, 2012 during ICEC2012.

**(b) Members**

Jaap Van Den Herik (chair), Hiroyuki Iida (vice-chair), Jos Uiterwijk (secretary), Brad Bushman, Paolo Ciancarini, Pedro Conzalez-Calero, Wijnand IJsselsteijn, Graham Kendall, Jong Weon Lee, Andre Melzer, Anton Nijholt, Abdennour El Rhalibi, Timothy Roden, Jonathan Schaeffer, Pieter Spronck, Mark Winands, Woontak Woo, Hyun S. Yang

**(c) Events****5. WG14.5 Social and Ethical Issues in Entertainment Computing**

Chair: Lynne BAILLIE (A/Prof., Glasgow Calendonian University, UK)

**(a) Meetings**

WG14.4 meeting was held in Vancouver, Canada on October 05 - 08, 2011 during ICEC2011 in conjunction with TC14 meeting. Next WG14.4 meeting will be held in Bremen, Germany on September 26 - 29, 2012 during ICEC2012.

**(b) Members**

Claire Dormann (CA), Porfirio Barroso Asenjo (ES), Lynne Baillie (GB), Christopher Zielinski (GB), Suzana Stojakovic-Celustka (HR), Ryohei Nakatsu (SG), Brad Bushman (US), Jeanne Funk (US)

**(c) Events****6. WG14.6 Interactive TV**

Chair: Lyn PEMBERTON (Dr., University of Brighton, UK)

**(a) Meetings**

WG14.6 meeting was held in Vancouver, Canada on October 05 – 08, 2011 in conjunction with TC14 meeting. Also another WG14.6 meeting was held in Berlin, Germany on July 04 - 06, 2012 during EuroITV2012. Next WG14.6 meeting will be held in Bremen, Germany on September 26 - 29, 2012 during ICEC2012.

**(b) Members**

Pablo Cesar (secretary, The Netherlands), Konstantinos Chorianopoulos (vice-chair, Germany), Owen Daly-Jones (UK), Mike Darnell (USA), Luis Fernando Gomes Soares (Brazil), David Geerts (Belgium), Shang Hsu (Taiwan), Jens F Jensen (Denmark), Tibor Kunert (Germany), Georgios Lekakos (Greece), Artur Lugmayr (Finland), Judith Masthoff (UK), Marianna Obrist (Austria), Lyn Pemberton (chair, UK), Célia Quico (Portugal), Mark Springett (UK), Zhang Liping (China)

**(c) Events**



10th European Interactive TV Conference  
July 04 – 06, 2012  
Berlin, Germany

General Chair: Stefan Arbanowski (Fraunhofer FOKUS, Germany)  
Stephan Steglich (Fraunhofer FOKUS, Germany)  
Program Chairs: Hendrik Knoche (EPFL, Switzerland)  
Jan Hess (University of Siegen, Germany)

## **7. WG14.7 Art and Entertainment**

Chair: Naoko TOSA (Prof., Kyoto University, Japan)

### (a) Meetings

WG14.7 meeting was held in Vancouver, Canada on October 05 – 07, 2011 in conjunction with TC14 meeting. Next WG14.7 meeting will be held in Bremen, Germany on September 26 - 29, 2012 during ICEC2012.

### (b) Members

Gerfried Stocker (Austria), Christian Warocquier (France), Gert van Tonder (Japan), Michihiko Mihoh (Japan), Soh Yeong Roh (Korea), Roy Ascott (UK), Bryan Loyall (USA), Claudio Pinhanez (USA), Erriki Hutamo (USA), Hisham M Bizri (USA), Jeffrey Huang (USA), Newton Lee (USA), Rod Brooks (USA), Scott Fischer (USA)

### (c) Events

The Second International Conference on Culture and Computing

Date: October 20 - 22, 2011

Venue: Kyoto University, Kyoto, Japan

Honoraty Chairs: Alan Kay (Viewpoints Research Institute, USA)  
Mokoto Nagao (National Diet Library, Japan)

Conference Co-Chairs:

Kozaburo Hachimura (Ritsumeikan University, Japan)  
Toru Ishida (Kyoto University, Japan)  
Naoko Tosa (Kyoto University, Japan)

**Part 2: Technical Assembly 2012 (Amsterdam, The Netherland)****TC14 Members (2012)***Officers*

Chairman Singapore	Ryohei NAKATSU (Prof., National University of Singapore)
Vice-Chair The Netherlands	Matthias RAUTERBERG (Prof., Eindhoven University of Technology)
Secretary Australia	Tim MARSH (Senior Lecturer, James Cook University)

*National Representatives*

Australia	(to be nominated)	
Austria	Helmut HLAVACS (Prof., University of Vienna)	[replaced]
Belgium	David GEERTS (Dr., KU Leuven)	[new]
Brazil	Esteban CLUA (A/Prof. Universidade Federal Fluminense)	[new]
Bulgaria	Zlatogor MINCHEV (Prof., Bulgarian Academy of Sciences)	[replaced]
Canada	Sidney FELS (Prof., University of British Columbia)	
China	Zhigeng PAN (Prof., Zhejiang University)	
Czech	David OBRZALEK (Dr., Charles University)	
Denmark	(to be nominated)	
Finland	Arthur LUGMAYR (Prof., Tampere University of Technology)	[replaced]
France	Stephane NATKIN (Prof., CNAM)	
Germany	Rainer MALAKA (Prof., University of Bremen)	
Greece	Nikitas SGOUROS (Prof., University of Piraeus)	[new]
Hungary	Barnabas TAKACS (Dr., Hungarian Academy of Sciences)	
Ireland	Mads HAAHR (A/Prof., Trinity College Dublin)	[replaced]
Italy	Paolo CIANCARINI (Prof., University of Bologna)	
Japan	Junich HOSHINO (A/Prof., Tsukuba University)	
Korea	Hyun S. YANG (Prof., KAIST)	
Malaysia	(to be nominated)	
Netherlands	Matthias RAUTERBERG (Prof., Technical University of Eindhoven)	
New Zealand	(to be nominated)	
Norway	Letizia JACCHERI (Prof., Norwegian Univ. of Science & Technology)	[replaced]
Poland	Pioty GAWRYSIAK (Prof., Warsaw University of Technology)	[replaced]
Portugal	Nuno CORREIA (Prof., New University of Lisbon)	
Singapore	Henry DUH (A/Prof., National University of Singapore)	[replaced]
Spain	Pedro GONZALEZ CALERO (Prof., Complutense University of Madrid)	
Switzerland	(to be nominated)	
Thailand	Natanicha CHORPOTHONG (Dr., Internet Association)	
United Kingdom	Marc CAVAZZA (Prof., University of Teesside)	
US-ACM	Magy SEIF EL-NASR (A/Prof., Northeastern University)	[replaced]
Zimbabwe	Miler MAKUNI (Mr., Afriswitch PVT Limited)	

*WG14.x Chair persons*

WG14.1     Marc Cavazza  
WG14.2     David Obdzalek  
WG14.3     Matthias Rauterberg  
WG14.4     Stephane Natkin  
WG14.5     Lynne Baillie  
WG14.6     Lyn Pemberton  
WG14.7     Naoko Tosa

*Observers*

IEEE Computer Science  
DiGRA:

Miguel Encarnacao (Dr., Imedia Inc.)  
Tony Manninen (Prof. University of Oulu)

*Honorary Members*

Japan:     Takehiko Kamae (Dr., National Institute of Technology)  
US:         Don Marinelli (Prof. Emeritus, Carnegie Mellon University)  
US:         Nahum Gershon

TC14 Meetings: Attendance

Nation	Year	02	03/ 1	03/ 2	04/ 1	05/ 1	06/ 1	06/ 2	07/ 1	07/ 2	08/ 1	08/ 2	09/ 1	09/ 2	10/ 1	10/ 2	11/ 1	11/ 2	12/ 1	Tot al
Australia											a	+	a	a	a	-	-	p	P	3
Austria					-	-	-	a	+	a	a	a	a	a	a	-	-	-	-	1
Belgium																			A	0
Brazil																			+	1
Bulgaria					a	a	a	a	a	-	-	-	-	-	-	-	-	-	-	0
Canada		-	-	-	a	+	a	a	a	a	+	a	a	+	a	+	+	+	+	7
China			-	-	a	+	a	+	a	p	+	p	a	a	+	p	a	a	+	8
Czech				-	-	-	-	+	+	+	a	a	+	+	a	+	a	-	-	5
Finland					+	+	a	a	a	-	-	-	-	-	-	-	-	-	-	2
France				-	+	a	a	a	a	a	p	+	+	+	a	+	p	+	+	9
Germany															+	+	+	+	+	7
Greece																				0
Hungary					-	-	+	a	a	+	a	a	a	a	a	a	a	-	-	2
Ireland				-	a	a	a	a	a	-	-	-	-	-	-	-	-	-	-	0
Italy			-	-	+	a	a	+	a	a	a	a	+	+	a	a	p	a	+	6
Japan		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	p	p	P	18
Korea			-	-	+	+	a	+	a	+	+	+	a	a	+	+	+	+	+	11
Netherlands		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	18
Norway				-	+	a	a	a	a	-	-	-	-	-	-	-	-	-	-	1
Poland																			P	1
Portugal					-	-	+	a	a	-	-	-	-	-	-	-	-	-	+	1
Singapore		-	-	-	+	+	+	+	a	a	+	a	a	p	p	p	p	p	+	11
Spain						-	+	a	a	-	-	a	a	+	a	a	a	A	A	2
Thailand					a	a	a	-	a	-	-	-	-	-	-	-	-	-	-	0
United Kingdom		+	+	+	+	a	+	+	+	a	+	a	+	p	a	a	a	-	-	10
USA-ACM		+	a	a	+	a	a	+	+	p	a	+	+	+	+	+	a	+	-	11
USA-IEEE									+	a	a	a	+	a	+	a	+	+	-	5
Zambia							-	-	a	a	a	-	-	-	-	-	-	-	-	0
WG14.1 Chair		+	+	+	+	a	+	+	+	a	+	a	+	p	a	a	a	-	-	10
WG14.2 Chair		+	a	a	+	+	+	+	+	+	+	a	a	+	p	p	p	-	+	12
WG14.3 Chair		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	18
WG14.4 Chair					+	+	a	+	a	p	a	p	a	+	p	p	p	+	+	11
WG14.5 Chair					+	+	a	+	+	a	a	a	+	+	a	a	a	-	-	6
WG14.6 Chair									+	p	a	a	+	+	a	a	a	a	+	5
WG14.7 Chair									+	+	p	+	+	+	+	+	+	+	+	11
		02	03/ 1	03/ 2	04/ 1	05/ 1	06/ 1	06/ 2	07/ 1	07/ 2	08/ 1	08/ 2	09/ 1	09/ 2	10/ 1	10/ 2	11/ 1	11/ 2	12/ 1	Tot al

— + representative attended — a apologies — p proxy— o observer