Ad-Hoc Coordinator: Future Technical Directions Report

Coordinator: Vladimir Katić (katav@uns.ac.rs) (IEEE Serbia and Montenegro Section)

Champion our links to "new" committees / initiatives established within the IEEE Technical Activities Board (TAB) - TAB Strategic Planning Committee → TAB New Technology Directions Committee, i.e (new name) IEEE Future Directions Committee (FDC), a standing committee of the TAB Strategic Planning Committee (http://www.ieee.org/about/volunteers/tab/tab_507.html)

Special attention to links with IEEE Smart Grid initiative, Cloud computing, IEEE's Committee on Earth Observations (ICEO), etc.

Special EU-IEEE or initiatives (EMEA-IEEE), for example: EuroGEOSS

Aim:
Develop synergy between "higher level" TAB committees and Region 8 organizational units, including sections. Seek out future technologies and related issues of potential interest to IEEE TAB and encourage the investigation of emerging technologies.

Scope:

The main topics regarding the FDC are:

- **Electrical Energy and Energy Efficiency:** Smart Grid*, Wind Power, Hydrogen Economy and Alternating Fuels, *(Renewable Energy, Photo-Voltaic/Concentrating Solar Power, Energy Storage, Smart Home (Smart Building), Smart City)***
- **Electric Transportation (new):** Electric Vehicles*, Plug-In-Hybrid EV, Electric Ship
- **Computing:** Cloud Computing*, Networked Multimedia*
- **Environment:** Earth Observation, Electronic Recycling
- **Health Care:** Health Care and BioScience*, Distributed Diagnosis and Home Healthcare, Electronic Health Record
- **Communications:** Wireless Fidelity (WiFi), Terabit Networks, RFID, Remote Sensing
- **Hardware:** Next Generation Computer Architecture*, Portable Information Devices (PID), Display Technologies, Organic Electronics
- **Digital Society:** Biometrics, Digital Rights Management (DRM), Fingerprinting, *(Computational Semiotics)***
- **Life Sciences New Initiative (LSNI)**

* Established Working Groups, ** *Added by V.Katic*

The major activities are within topics of the Smart Grid, Electric Vehicles, Cloud Computing, Networked Multimedia, Health Care and BioScience, and Next Generation Computer Architecture, where FDC Technology working groups have been established.

Other important issues (outside the FDC):

- IEEE's Committee on Earth Observations (ICEO): The Global Earth Observation System of Systems (GEOSS), EuroGEOSS, ...

Within the abovementioned areas, there is some overlap with activities with our new IEEE staff office.

The ad hoc coordinator will therefore keep Karine posted from time-to-time:

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Case of IEEE R8 TAB activities:

a) Chapters: The chapters of the main Societies that are dealing with the FDC topics are active in R8. Example: IEEE R8 Power Chapters Technical & Leadership Joint Workshop, Budapest, Bratislava, Zilina, 21-26 May 2010.
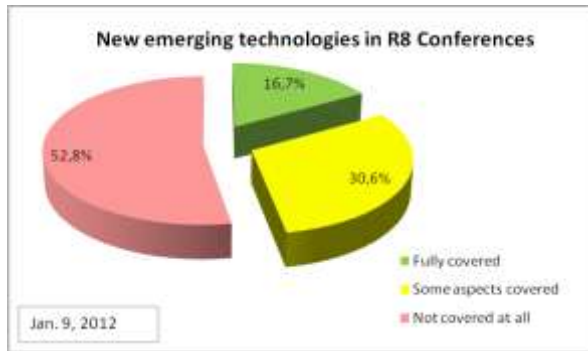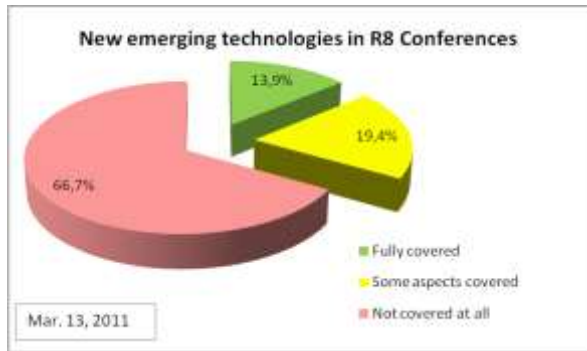
b) Conferences: The R8 conferences are organized regionally, including Energycon. Overview of the R8 conference topics regarding major FDC topics is represented in table below.

Date: Sep.9, 2012

Legend: 🟥 NO such topics, 🟨 Some aspects are covered, 🟩 Fully covered

/FDC Topic R8 Conference	Smart Grid	Electric Vehicles	Cloud Computing	Next Gen. Computer Arch.	Networked Multimedia	Healthcare & Bioscience
AFRICON 2011 13-15 Sep. 2011 Livingston, ZAM	🟨	🟥	🟨	🟥	🟥	🟨
MELECON 2012 25-28 Mar. 2012 Hammamet, TUN	🟨	🟥	🟥	🟥	🟨	🟥
SIBIRCON 2012 27-31 Aug. 2012 Belokuriha, RUS	🟩	🟨	🟥	🟥	🟨	🟥
HISTELCON 2012 5-7 Sep. 2012 Pavia, ITA	🟥	🟥	🟥	🟥	🟥	🟥
ENERGYCON 2012 9-12 Sep. 2012 Florence, ITA	🟩	🟩	🟨	🟨	🟥	🟥
EUROCON 2013 2-5 July 2013 Zagreb, CRO	🟩	🟩	🟨	🟥	🟩	🟨
AFRICON 2013 9-12 Sept. 2013 Mauritius	N/A	N/A	N/A	N/A	N/A	N/A

The new emerging technologies have improved their participation in comparison to previous report (March 13, 2011). Their share in topics of R8 conferences has risen to from 13.9 % to 16.7 % (see to pie charts below). However, there are no additional information since March 2012.

Still, it can be concluded that the new emerging technologies are not well covered in the R8 conferences. Such case can have effects on actuality and attractiveness of these conferences. Therefore, the ad hoc coordinator will work with the Conferences Coordination Subcommittee (CoCSC) towards promoting these new areas of work.

c) Education: FDC topics are not present in the program of the EASC. The EASC met in Berlin (30 Mar. 2012) and and it was concluded to organize a WebEx conference on one of the FDC topics

d) Industry relations: The IRSC is active in some new fields, especially dealing with Energy - Renewable energy.

e) Standards: There is opportunity to get involved, but no visible activities (other than in the Smart Grid area) in FDC topics so far.

Activity plan for 2012:

Period Jan-Dec. 2012

1. Deliverable #1: Report / Plan for 2012   (Submitted 15 Jan.2012)

2. Establish e-mail contacts with following WG and their chairs   (Jan.-Mar. 2012)

Working Group	Co-Chair(s)	Email	Status
Green ICT	Alexis Kwasinski	akwasins@mail.utexas.edu	YES
Technology Time Machine	J Roberto Boisson de Marca	rdemarca@uol.com.br	YES
Smart Grid	Wanda K Reder	wreder@sandc.com	YES
Cloud Computing	Stephen L Diamond	s.diamond@computer.org	NO
Electric Vehicles	Russell J Lefevre	r.lefevre@ieee.org	YES
IEEE Committee on Earth Observations (ICEO)	Tom Wiener CC: Jay Pearlman CC: Michael Lightner	t.wiener@ieee.org jay.pearlman@ieee.org Michael.Lightner@colorado.edu	YES
Life Science Initiative			

3. Organize a WebEx conference   Organized on March 20, 2012

Participants: FDC WG Chairs and TAB Committee

Topic: Collaboration between FDC and R8 TAB

The IEEE FD committee is lead by Roberto DeMarca (rdemarca@uol.com.br), who was speaker at the conference

Deliverable #3: Minutes/Summary from the WebEx conference   (Apr. 2012)

4. Actions to include more FDC topics into the R8 Conferences:

Presentation of FDC activities at the CoCSC Meeting in Berlin   (March 30, 2012)

Deliverable #4: ppt Presentation

A short report was published in R8 Newsletter, June 2012 issue.

5.. Deliverable #5: 200-300 words article for R8 Newsletter about FDC in R8   Published in June
2012 issue

http://ttm.ieee.org

6. IEEE Webinar together with Education Activities Subcommittee on topic "Introduction to Electric Vehicles". Postponed due to operation/functional problems of WebEx system
July 3, 2012

7. To set a list of Distinguished Lecturers in the FDT (DLiFuDiT)   (Oct. 2012)

Deliverable #2.1: List of Distinguished Lecturers (webinars, teleconferences)

Explore presentations/collaborations with Region 8 sections

Deliverable #2.2: Submit a short article 200-300 words to Region 8 news   28 Feb. 2012

(r8news@ieee.org)

8. Deliverable #7: 150-200 words article for R8 Newsletter

- announcement of Webinar to be held in Nov 2012   (Sep 2012)

9. Skype conference with TAB   (late Aug. 2012)

10. Webinar of one of the DLiFuDiT   (Sep. 2012)

11. Face–to-Face / TC meeting at the R8 Meeting   (Oct. 2012)

12. Lecture on a FDC topic via Skype at the R8 Meeting   (Oct. 2012)

      Deliverable #8: ppt Presentation

13. Preparation of plan for 2013   (Nov. 2012)

14. Deliverable #9: Activity plan for 2013   (Dec. 2012)