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INTERNATIONAL ELECTROTECHNICAL COMMISSION

Strategic Group 11 – Hot Topic Radar

Minutes of the on line meeting held on 19th December 20176 from 1PM to 3PM.

Note: The slides presented during the meeting are provided in annex.

Participants

Role	Name	NC
Member	Ms Sophie Clivio	ISO
Member	Ms Gabriela Ehrlich	IEC/CO
Member	Mr Martin Euchner	ITU
Member	Mr David Hanlon	IEC/CO
Member	Mr Jochen Kreusel	DE
Member	Mr Jeongjoon Lee	KR
Member	Mr Yoichi Maeda	ITU
Member	Mr Alberto Garcia Mogollon	GB
Convenor	Mr Emmanuel Petit	FR
Secretary	Mr Pierre Sebellin	IEC/CO
Member	Mr Andreas Starke	DE

Excused

Role	Name	NC
Member	Mr Thomas Korssell	SE
Member	Dr Seungyun Lee	JTC1/JETI
Member	Mr Vimal Mahendru	IN
Member	Mr Alexander McMillan	US
Member	Mr Noritaka Okuda	JP
Member	Mr Peter J. Lanctot	IEC/CO

1 Opening of the meeting and raw call of the members

The SG 11 Convenor opened the meeting and welcomed the members attending this first on line meeting. He agreed that for a first meeting, a face to face meeting would have been better, but this was not possible on short term.

2 Approval of the agenda

The SG 11 Secretary presented the items of the agenda and asked if there were any other items to be added. The agenda SG11/1/DA was approved.

The SG 11 Convenor invited the members to briefly introduce themselves and asked them to provide a short sentence about the contribution they expect to bring to the group.

S. Clivio: Secretary of the ISO TMB and member of ISO strategy groups

G. Ehrlich: Managing the CO communication group which is doing regular hot topics screening from the communication view point and may help due to apparent synergies

J. Kreusel: ABB marketing power grid division, nominated by DKE.

J.J. Lee: Works for LS Industry Systems, member of SMB

Y. Maeda: Head of TTC in Japan and working at ITU

A. Mogollon: Works with BSI, on emerging technologies and innovation lead. Participate to industry innovation management groups in UK.

A. Starke: Works for Harting, in the intellectual property team of the company

3 Review the Tasks of SG 11

The Convenor displayed the SMB Decision 159/7 recorded in SMB/6186/DL, and reviewed the details of the mission.

The Convenor presented a process graph in order to summarize the work and process expected from SG 11. There are two steps:

1- Define the process to detect hot topics and sort them
2- Implement this process and recommend further steps to SMB for the main Hot Topics

4 Define the deliverables of SG 11

Definition of a Hot topic:
A first key joint work is to agree on a definition of a “Hot Topic”. From the SMB Decision, if is understood as “emerging issues, including technological changes and other changes to the technical work of the IEC”.

G. Ehrlich: The Communication Team looks for:

– Topics with immediate impact in particular related to potential risk on the IEC image
– Topics that have long term / strategic impact

D. Hanlon: A hot topic can be identified by the CAB and reported back to SG 11.
M. Euchner: In the definition provided, the term “emerging” could mean something on the horizon.

There are two possible understanding of a hot topic: urgent short term matter, or longer term technology evolution.

P. Sebellin: From the SMB discussions that led to the decision, this is more about longer term issues.
J.J. Lee: An example of hot topic would be “digitalization” which is a general challenge other than a technological change.
G. Ehrlich: An example of short/immediate hot topic would be the refrigerating gaz which is used in fridges and air conditioners. Regulations can also be the source of hot topics

4.1 Processes for detecting and sorting hot topics

A first deliverable from SG 11 is a process describing:

– How to detect Hot Topics

– How to sort Hot Topics to identify the main Hot Topics

SG 11 needs to identify a method and criteria to select which are the main ones

4.2 A list of Hot Topics / A simple database of Hot Topics with the main information useful for sorting

Another deliverable is the definition of the format under which the hot topics should be recorded and reported.

4.3 Recommendation to SMB on furthers steps for the few main Hot Topics

Another deliverable is a set of recommendations for actions by the SMB regarding the main Hot Topics identified.

5 Identify similar initiatives and experiences

The IEC is not the only organization intending to set-up processes in order to detect and sort hot topics. And in the IEC, this is not the first initiative related to innovation screening.

This is why it is useful to look into similar past activities in IEC and similar current activities outside IEC.

5.1 Ad-hoc Group 41 "New Technologies"

Peter Lanctot, the Secretary of ahG 41could not join the meeting but provided a written contribution by summarizing the main outcomes from the ahG 41 work and attempts to operate innovation screening.

– Main point to mention: staffing
  The CO did not have anyone to manage it, nor were the SMB members volunteering either. He volunteered but could not maintain it.

– Second issue: budget needed
  Researchers would be looking for prize money if their ideas/research were to be recognized as part of an award or contest. A minimum of 50k USD would be required per year. Any less money would not attract consistent high level input from the researcher.

– This project died, probably from lack of sustained support

G. Ehrlich: This can be time consuming, the COM group is screening into a large number of information and possible synergies exist with the Hot Topics detection task of SG 11.

5.2 Ad-hoc Group 60 report on Disrupting Technologies

J.J. Lee: ahG 60 started because the SMB was concerned about disrupting technologies coming out and the standardization needs would be missed by the IEC. From the regulator side, when new products come into the market, there is a concern about standards that would ensure a safe use of these new products. AhG 60 tried to investigate what should be done in such a situation.

When young and new technologies are coming, ahG 60 was concerned to identify the ones that would potentially disrupt the market.

AhG 60 recommended establishing a screening process for innovative/disruptive technologies with the following characteristics:

This would be a wide screening process into the new and innovative technologies being developed by electrotechnology stakeholders in order to pull out potentially disruptive technologies of interest to the IEC and raise the flag for deeper investigation.

– The process should be continuous and the group in charge of implementing this process would need to be permanent.

– It could include representatives from various stakeholder categories and/or be coordinated from the IEC Central Office.

– Stakeholders that could be represented comprise academia, R&D institutes, leading industry innovators, start-ups, consultants, online communities, existing IEC committees, etc. And preferably they would come with diverse disciplinary backgrounds, e.g. not only from

engineering, but also from a variety of disciplines like law, business, marketing, consumer studies, social studies, and so on.

– The screening scope should be left to the stakeholders in order not to restrict arbitrarily the range of inputs collected.
– A set of assessment criteria would have to be devised, such as Technology Readiness Level (TRL), potential market size, mass market vs. niche market, etc.

5.3 Social media watch

G. Ehrlich reported. The Communication Group is a team of 6 writers. To write articles, we are screening the media for hot topics. The CES exhibition (The Global Stage for Innovation, https://www.ces.tech/) is a very interesting place to visit for new technologies. We also subscribe to news and we can add in further keywords to fit the needs of SG 11 screening. Social media is a source of the newest technology and we can search for key words, become followers of key people, subjects, and channels. We need to be aware of what key industries, what key words need to be screened, and what would be the final output, which format (mail, newsletter, dashboard).

E. Petit: Do you already have a short list of issues that could be hot topics?

G. Ehrlich: At this point, it could be a report which has been picked up and shared with identified people. It can be very big or very small, and can also lead to a flood of information.

E. Petit: It is understood that there are small and big issues and that some issues can easily be directly forwarded to a TC. It would be interesting to have examples of issues for which there was no obvious relevant TC.

G. Ehrlich: Example of hot topic frequently mentioned in the social media AI or smart devices.

E. Petit: Gabriela, can you look into the best way useful information extracted from the screening by the COM group can be provided to SG 11?

6 Discuss the process

6.1 Process to detect a Hot Topics

E. Petit: In order to define the process for detecting a hot topic, it should first be clearly defined what a Hot Topic is. Some exchanges too place under Item 4 but required a deeper discussion and a conclusion.

How to detect hot topics?

- Include a wide base of stakeholders.
- Benefit from the existing IEC resources:
  - CO communication (Gabriela)
  - Existing TCs: have a careful reading of the RSMBs and SPBs where new technologies

D. Hanlon: Sometimes, needs for CA are raising and standards in the area are missing. In the opposite, sometimes there are too many standards that are published by a wide set of organizations.

J.J. Lee: We need to focus on the new technologies which are not yet covered by an existing TC. Regarding the cooperation to the MSB, AhG 60 screening was proposed to MSB but this could not be implemented due to lack of resources. The situation when too many standards are published on the same specific subject is to be considered by the SMB, not SG 11.

M. Euchner: Cyber Security is a hot topic and is a busy area with more and more standards published. But I am not sure this type of topic can be considered as qualifying as a hot topic in the understanding of SG 11. The CAB approach looks interesting as it will

potentially identify gaps that could be filled in short term by developments in existing TCs. So gaps highlighted by CAB could be an interesting approach.

G. Ehrlich: We should be focussed because cybersecurity, AI and other topics are so broad that we need to focus.

M. Starke: This is interesting and could lead to identify gaps in regulations.

E. Petit: Another method to benefit from the existing IEC resources would also be to develop an on line questionnaire for TC/SC Officers.

6.2 Process to assess and sort Hot Topics in order to select the main Hot Topics

The process is expected to develop the following:

- Identification of useful information on each Hot Topic (criteria)
- Format of the database of Hot Topics

One key question is: How to assess and sort the Hot Topics??

The discussion raised the need to identify criteria which will allow sorting the most relevant hot topics. The criteria will also be useful to better focus the screening process.

Initial list of criteria:

- Vertical or horizontal technology
- Short term or long term impact
- …

6.3 Process to recommend further steps to SMB

Due to lack of time, this item of the agenda was not developed. This may simply be addressed on a case by case basis for the main Hot Topics.

7 Discuss the implementation of the process

This item will be considered during a future meeting.

8 Discuss about potential liaisons and collaborations

8.1 Within IEC, in particular MSB and CAB

See 6.1, comments from D. Hanlon.

8.2 With other Standardization Organisations: ISO, ITU…

S. Clivio reported about ISO activities: There are similar activities but not exactly about the same hot topics. The issue is more about how to answer quickly to emerging needs. ISO, uses a bottom-up approach from the TCs to the management groups who would evaluate if ISO should take any action. This is then discussed at the TMB or Council level in order to define if strategic actions are needed. The monitoring actions are belonging to a Council group. There is a new group set up on a similar subject. ISO has no process to identify new Hot Topics, but once identified, there is a process.

E. Petit: SG 11 is focussing on earlier steps dealing with the identification process.

M. Euchner: In ITU, there is no similar group, but similar activities are taking place in several groups. ITU has a “Technology Watch” group who will pick up new technologies, not necessarily hot, and will prepare some reports about them. This work is depending on staffing and financial resources. ITU relies on its members support for this.

ITU has also a Telecommunications Standards Advisory Committee (TSAC). The members bring in hot topics and the convenor will set up a group to further investigate if the topic needs further investigations. The members are an important source of information for the TSAC rapporteur. Other contributions come from CTOs who report about their future needs, in practice this is a valuable source of information.

M. Euchner: ITU has no formal process and sometime the membership drives ITU T on short term needs during workshops. This can then lead to a “Focus Group”, which is an

open group. It looks at the topic from a wide approach and defines if there are needs for standardization and for establishing a specific structure to handle them.

9 Review of the membership

The time allocated for the meeting did not permit to discuss this item in details. The members are invited to think about the expertise needed to have SG 11 provide its deliverables and which additional expertise would be helpful. In particular, it should be considered if SG 11 as the appropriate diversity of stakeholders.

10 Define the SG 11 action plan

In order to produce its deliverables, SG 11 defined two work packages and allocated them to two tasks groups.

10.1 WP1 Process / methodology for detecting Hot Topics

Volunteers: G. Ehrlich, D. Hanlon, J. Kreusel, J.J. Lee, Y. Maeda, A. Mologon, A. Starke.

10.2 WP2 Process / methodology for sorting Hot Topics

Criteria for sorting information for each Hot Topic. Identifying criteria and impact on relevant hot topic

Volunteer: G. Ehrlich (with preference to WP1)

M. Euchner: Would some sort of brainstorming based on examples would help setting the criteria.

This proposal was welcomed and will be further considered.

10.3 Planning and deadlines

P. Sebellin presented a draft action plan with its milestones.

Project milestones:

- Deliver an intermediate report for the SMB meeting of 2018-06-12

  Content = process for detecting + sorting (criteria) + first list of Hot Topics
- Deadline for submitting the report to the Secretariat: 2018-04-20
- Circulation of report to SG 11 members for comments: 2018-03-30
- Providing of individual contributions: 2018-03-16

10.4 Table of content for the June 2018 report to the SMB

P. Sebellin presented a draft table of content for the June 2018 SG 11 intermediate report. And opened the discussion.

Here under the initial draft:

1. SMB Decision 159/7
2. SG 11 work approach (task divided in WPs)
3. Process for detecting Hot Topics
4. Process and methodology for sorting Hot Topics
   1. Criteria for sorting Hot Topics → Request for approval by SMB
   2. Required information for each Hot Topic
5. Initial list of Hot Topics
6. Annexes
   1. Hot Topic description form
   2. SG 11 Membership

Following the discussion, it was proposed to add the definition of a hot topic in a separate section.

Note from the Secretary: another valuable section would be about activities in other organizations (ISO, ITU, etc.).

11 Any other business

No any other business was raised.

12 Date and place of the next meetings

Face to Face meeting on 15 February 2018 afternoon, in Vienna, in conjunction with the SMB meeting
Meeting place:

Austrian Electrotechnical Association (OVE)
Eschenbachgasse 9
1010 Vienna, Austria
Tel: + 43 1 587 63 73-0
Internet: www.ove.at

On line connection will be provided.

13 Close of the meeting

The Convenor thanked the participants for their contribution and is looking forward for their contribution for the next steps.
The meeting was closed at 3:15PM.

Strategic Group 11
Hot Topic Radar

International
Electrotechnical
Commission

1 Opening of the meeting and raw call of the members

Role	Name	NC
Member	Ms Sophie Clivio	ISO
Member	Ms Gabriela Ehrlich	IEC/CO
Member	Mr Martin Euchner	ITU
Member	Mr David Hanlon	IEC/CO
Member	Mr Thomas Korssell	SE
Member	Mr Jochen Kreusel	DE
Member	Mr Peter J. Lanctot	IEC/CO
Member	Mr Jeongjoon Lee	KR
Member	Dr Seungyun Lee	JTC1/JETI
Member	Mr Yoichi Maeda	ITU
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Member	Mr Noritaka Okuda	JP
Convenor	Mr Emmanuel Petit	FR
Secretary	Mr Pierre Sebellin	IEC/CO
Member	Mr Andreas Starke	DE

2 Approval of the agenda

Item	Description	Documents
1	Opening of the meeting and raw call of the members	
2	Approval of the agenda	SG11/1A/DA
3	Review the Tasks of SG 11	SMB/6186/DL
4	Define the deliverables of SG 11	
5	Identify similar initiatives and experiences (who, when and key outcomes)	TechTrends2018
5.1	Ad-hoc Group 41 “New Technologies”	SMB/5405/R
5.2	Ad-hoc Group 60 report on Disrupting Technologies	SMB/5875/R
5.3	Social media watch (Gabriela)	
6	Discuss the process	
6.1	Process to detect Hot Topics	
6.2	Process to assess and sort Hot Topics in order to select the main Hot Topics - Identification of useful information on each Hot Topic (criteria) - Format of the database of Hot Topics	
6.3	Process to recommend further steps to SMB	
7	Discuss the implementation of the process	
8	Discuss about potential liaisons and collaborations	
8.1	Within IEC, in particular MSB and CAB	
8.2	With other Standardization Organisations: ISO, ITU…	
8.3	With others	
9	Review of the membership	
10	Define the SG 11 action plan (planning, work packages and allocation of these work packages)	
11	Any other business	
12	Date and place of the next meeting	
13	Close of the meeting	

3 Review the Tasks of SG 11

SMB Decision 159/7

recorded in SMB/6186/DL following the SMB meeting 159, held on 2017-06-12 in Geneva, Switzerland

4 SMB CAG – Hot Topic Radar

SMB Decision 159/7 – CAG – Hot Topic Radar

SMB agreed to set up a Strategic Group, SG 11, *Hot Topic Radar,* to proactively monitor emerging issues, including technological changes and other challenges to the technical work of IEC.
Its tasks include the definition of a process and its implementation to:
- **detect and maintain a list of hot topics,**
- **recommend further steps to SMB.**

In future SG 11 will communicate closely with corresponding initiatives in MSB and CAB.
SMB appointed Mr Emmanuel Petit (FR) as Convenor.
Members: CN, DE, IN, IT, JP, KR, SE, UK, US, ISO and ITU.
SG 11 is invited to report back at least once per year to SMB, starting with SMB 162 meeting in June 2018.

3 Review the Tasks of SG 11

	Detect Hot Topics	Sort Hot Topics	Recommend Further steps to SMB
Process	1	2	
Implementation	3	4	5

4 Define the deliverables

1) A process
   - How to detect Hot Topics
   - How to sort Hot Topics to identify the main Hot Topics

2) A list of Hot Topics / A simple database of Hot Topics with the main information useful for sorting

3) Recommendation to SMB on furthers steps for the few main Hot Topics

5 Identify similar initiatives and experiences
5.1 ahG 41 "New Technologies"

Feedback from Peter Lanctot (Secretary ahG 41)

- **Main point to mention: staffing**
  The CO did not have anyone to manage it, nor were the SMB members volunteering either. I volunteered but I could not maintain it.
- **Second issue: budget needed**
  Researchers would be looking for prize money if their ideas/research were to be recognized as part of an award or contest. A minimum of 50k USD would be required per year. Any less money would not attract consistent high level input from the researcher.
- **This project died, probably from lack of sustained support**

5.2 ahG 60 report abstracts

5 Recommendations

5.1 Disruptive Technology Screening Process

This would be a wide screening process into the new and innovative technologies being developed by electrotechnology stakeholders in order to pull out potentially disruptive technologies of interest to the IEC and raise the flag for deeper investigation.

- The process should be continuous and the group in charge of implementing this process would need to be permanent.
- It could include representatives from various stakeholder categories and/or be coordinated from the IEC Central Office.
- Stakeholders that could be represented comprise academia, R&D institutes, leading industry innovators, start-ups, consultants, online communities, existing IEC committees, etc. And preferably they would come with diverse disciplinary backgrounds, e.g. not only from engineering, but also from a variety of disciplines like law, business, marketing, consumer studies, social studies, and so on.
- The screening scope should be left to the stakeholders in order not to restrict arbitrarily the range of inputs collected.
- A set of assessment criteria would have to be devised, such as Technology Readiness Level (TRL), potential market size, mass market vs. niche market, etc.

ahG 60 report abstracts

5.4 Conferences

There are a few, though not many, communities of researchers who specialise in standards and standardisation. The most known examples are:

- EURAS (European Academy for Standardisation) (www.euras.org) was founded in 1993 by researchers from various academic fields including economics, engineering, social sciences, law, and information sciences.

- SIIT (Standardization and Innovation in Information Technology) (sites.ieee.org/siit2015), which is associated with IEEE Standards Association, focuses more specifically on information and communication technologies.

They often hold workshops, symposia and conferences which are closely related to emerging or potentially disruptive technologies. Recent examples include workshops on 'Standardising the IoT and its Applications' (https://www.comsys.rwth-aachen.de/team/kai-jakobs/workshop-standardising-the-iot-and-its-applications/) and 'Standardisation of Cyber-Physical Systems' (file:///C:/Users/user/Downloads/CfP_WS-CPS.pdf).

ISO, in partnership with CERN, held a conference in 2014 on Standardization and Innovation: http://www.iso.org/sites/standardsinnovationconference/index.html.

ahG 60 report abstracts

What Standards Development Organisations (SDOs) have done to look at disruptive technologies?

- **International SDOs:**

  ISO/IEC Advisory Board on Technology Trends

  JTC1

  ITU

- **Regional SDOs: Europe**

- **National experiences : UK, DE…**

5.3 Social media watch

Information from Gabriela Ehrlich

6 Discuss the process
6.1 Process to detect Hot Topics

Methodology similar to ahG 60

1) What is a Hot Topic?

→ ? Emerging issue, including technological change and other challenge to the technical (standardization) work of IEC

Hot Topic is not limited to

- **Technological change**
- **Disruptive change**

6.1 Process to detect Hot Topics

2) How to detect

- **Include representatives from various stakeholders**
- **Benefit from IEC resources**

  TCs including JTC1: RSMB, possible questionnaire …

  Cooperation with MSB and CAB
- **SDOs**

  International: ISO, ITU

  Regional: Europe CLC

  National: UK, DE…
- **Other Organizations**

6.2 Process to assess and sort Hot Topics in order to select the main Hot Topics

- Identification of useful information on each Hot Topic (criteria)

- Format of the database of Hot Topics

6.3 Process to recommend further steps to SMB

7 Discuss the implementation of the process

8 Discuss about potential liaisons and collaborations

8.1 within IEC, in particular MSB and CAB

8.2 with other Standardization Organisations: ISO, ITU…

8.3 others

9 Review of the membership (Need for complement ?)

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Member	Ms Sophie Clivio	ISO
Member	Ms Gabriela Ehrlich	IEC/CO
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Member	Mr Andreas Starke	DE

10 SG 11 action plan

Work packages and allocation of these work packages

WP1 Process / methodology for detecting Hot Topics

WP2 Process / methodology for sorting Hot Topics

- **Criteria for sorting**
- **→ Required information for each Hot Topic**

10 SG 11 action plan / Planning

Project milestones:

- Deliver an intermediate report for the SMB meeting of 2018-06-12

  Content = process for detecting + sorting (criteria) + first list of Hot Topics
- Deadline for submitting the report to the Secretariat: 2018-04-20
- Circulation of report to SG 11 members for comments: 2018-03-30
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11 SG 11 June 2018 report
Proposed table of content

1. SMB Decision 159/7
2. SG 11 work approach (task divided in WPs)
3. Process for detecting Hot Topics
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   1. Criteria for sorting Hot Topics → Request for approval by SMB
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6. Annexes
   1. Hot Topic description form
   2. SG 11 Membership

11 Any other business

12 Date and place of the next meeting

13 Close of the meeting

Thank you !

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