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| ITU Logo | INTERNATIONAL TELECOMMUNICATION UNION  **TELECOMMUNICATION STANDARDIZATION SECTOR**  STUDY PERIOD 2017-2020 | | FG-AI4EE-WG3-O-004 | |
| **Focus Group on Environmental Efficiency for AI and other Emerging Technologies** | |
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| **Purpose:** | | Information | | |
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| **Keywords:** | Meeting report; FG-AI4EE; WG3 |
| **Abstract:** | This document contains the report FG-AI4EE Working Group 3 fourth e-meeting, held on 2 September 2021, 13:00-14:30 (CEST) |

# Introduction

Experts of FG-AI4EE Working Group 3 met virtually on 2 September 2021.

The draft agenda and document allocation were provided in document [FG-AI4EE-WG3-I-055](https://extranet.itu.int/sites/itu-t/focusgroups/ai4ee/wg/_layouts/15/WopiFrame.aspx?sourcedoc=%7B1A84A70B-C095-4A4C-BF63-D14DA1846C36%7D&file=FG-AI4EE-WG3-I-055.docx&action=default). The agenda was approved without modification.

All documents discussed are available on Working Group 3 SharePoint page:

<https://extranet.itu.int/sites/itu-t/focusgroups/ai4ee/wg/SitePages/WG3.aspx>

## Participants

This e-meeting was attended by 21 participants. The final list of participants is available in Annex 1 of this document.

# Discussion and Summary of inputs

## Opening

FG-AI4EE Co-Chairmen, Ying Shi and Stefano Nativi opened the meeting and welcomed everyone.

### Discussion on deliverable D.WG3-01: Technical Report - Guidelines on the implementation of eco-friendly criterias for AI and other emerging technologies – Leader: Bosen Liu [see document [FG-AI4EE-WG3-I-057](https://extranet.itu.int/sites/itu-t/focusgroups/ai4ee/wg/_layouts/15/WopiFrame.aspx?sourcedoc=%7BD794BB0D-F01C-47EF-AA28-9997B71C7CA8%7D&file=FG-AI4EE-WG3-I-057.docx&action=default&CT=1631554506620&OR=DocLibClassicUI)]

#### Presentation

*This technical report provides guidelines to policy relevant stakeholders in industries of technology, environmental sciences, development practices, and policy arenas on the topic of eco-friendly criteria in order to further assess environmental impacts of artificial intelligence as well as other emerging technologies. These guidelines hope to serve as common factors rather than a comprehensive list for technologists to consider while designing and building any piece of technology.*

Bosen Liu, Ladder Education Group, first presented the comments received from Tony Tony Lee Luen Len, Ecosis, Mauritius, on the draft report. See document [[FG-AI4EE-WG3-I-057](https://extranet.itu.int/sites/itu-t/focusgroups/ai4ee/wg/_layouts/15/WopiFrame.aspx?sourcedoc=%7BD794BB0D-F01C-47EF-AA28-9997B71C7CA8%7D&file=FG-AI4EE-WG3-I-057.docx&action=default&CT=1631554506620&OR=DocLibClassicUI)]

Bosen then presented an update on the latest version of the document, and highlighted sections that had been updated since the last presentation. [[FG-AI4EE-WG3-I-057](https://extranet.itu.int/sites/itu-t/focusgroups/ai4ee/wg/_layouts/15/WopiFrame.aspx?sourcedoc=%7BD794BB0D-F01C-47EF-AA28-9997B71C7CA8%7D&file=FG-AI4EE-WG3-I-057.docx&action=default&CT=1631554506620&OR=DocLibClassicUI)]

Bosen noted that this document had received many inputs from experts, and that its length had been considerably reduced to make it more concise and focused on the guidelines as agreed at last meeting.

Bosen pointed out sections where Contributions from experts are needed to finalize the report:

* Brief section 5.2.4 on AI and three stages
* Track the innovation of the recommendations in section 5.3.3 with shortened bullet-point or chart
* Develop section 5.4.2 on Drones

#### Comments on the draft

Experts suggested to consider the following areas:

Editorial comments:

* Terms and definitions: Remove duplication of terms that appear both in 3.1 and in 3.2, update terms defined elsewhere with ITU definitions as appropriate.
  + “Terms defined elsewhere”: [ITU definitions](https://www.itu.int/net/ITU-R/index.asp?redirect=true&category=information&rlink=terminology-database&lang=en&adsearch=&SearchTerminology=&collection=&sector=&language=all&part=abbreviationterm&kind=anywhere&StartRecord=1&NumberRecords=50) to be used as a priority and then [ISO](https://www.iso.org/obp/ui/#search) and [IEC](https://std.iec.ch/glossary).
  + “Terms defined here”: Use as much as possible definitions coined in other FG published deliverables. Definitions from WG1 [deliverable on KPIs](https://www.itu.int/en/ITU-T/focusgroups/ai4ee/Documents/TS-D.WG1_04-List%20of%20KPIS%20List%20of%20KPIs%20SMEs%20to%20assess%20the%20achievement%20of%20SDGs_Magerholm%20Fet_%20Major.pdf) and WG2 [draft deliverable computer processing, data management and energy perspective](https://extranet.itu.int/sites/itu-t/focusgroups/ai4ee/wg/_layouts/15/WopiFrame.aspx?sourcedoc=%7B6EF4303F-4887-4B85-B179-2EA4D21F59E7%7D&file=FG-AI4EE-I-037.docx&action=default), shall be used to fill out this section, as appropriate.
  + ”Embodied Energy” to be included in definition (use the term in WG1 deliverable on [KPIs for SMEs to assess the achievement to the SDGs](https://www.itu.int/en/ITU-T/focusgroups/ai4ee/Documents/TS-D.WG1_04-List%20of%20KPIS%20List%20of%20KPIs%20SMEs%20to%20assess%20the%20achievement%20of%20SDGs_Magerholm%20Fet_%20Major.pdf))
* Check throughout the document and update to “Technical Report” (formerly technical Specification)
* Update headlines sections with “AI **AND** other emerging technologies”
* Be consistent in using the term “emerging technologies” throughout the report
* Watch out for text repetition (copy paste) in the tables, such as the bullet points in the paragraph 5.1.

Structure comments:

* Merge different “challenges” brought by emerging technologies in a single section
* Consider finding overarching impact areas of emerging tech, and address them, to avoid creating duplications and having to list all emerging technologies
* Keep focus on the guidelines
* Avoid repetition of recommendations in the application section
* Updated the draft of the D.WG3-01 by clarifying the definitions of “emerging technologies”
* Provide a concise summary of section 5.2.4 on AI and the three stages
* Decide whether the survey design in section 5.3.2 is required in this technical report
* Update of the recommendations section 5.3.3 with bullet-point or chart.

**Actions:**

* Bosen to implement changes discussed and send new draft to ITU by 19 September 2021.
* WG3 Experts to review new draft and provide comments on structure ahead of next WG3 meeting on 23 September 2021.

## Discussion on deliverable D.WG3-03: Technical Report - Application of AI technology in improving energy efficiency of telecom equipment rooms and IDC infrastructure – Leader: Shi Ying (see document [FG-AI4EE-WG3-I-056](https://extranet.itu.int/sites/itu-t/focusgroups/ai4ee/wg/_layouts/15/WopiFrame2.aspx?sourcedoc=%7B521FDEE7-7A89-4C48-ABA5-A0A4F7DA8527%7D&file=FG-AI4EE-WG3-I-056.docx&action=default))

### Presentation

Shi Ying, China Telecom, went through the document and highlighted sections that were added since the last draft, including reframing the scope of the report, and making figures clearer and aligned with the requirement of the template.

### Comments on the draft

No comments on the draft.

# Next steps & actions

* An updated draft of D.WG3-01 will be circulated by 21 September 2021 to the WG3 colleagues who can review the draft before the next meeting of WG3 on 23 September 2021 which will aim to take stock on progress on the items discussed.
* The final draft of D.WG3-03 will be circulated among WG3 Experts for a period of two weeks until 28 September COB, ahead of FG-AI4EE fourth meeting on 21 October 2021.
* The aim will be to present the final draft of deliverable D.WG3-03 at the next FG-AI4EE meeting.

# Next e-meeting

* 23 September 2021, 13:00-14:30 (CEST) on D.WG3-01

# Other business

No other business was discussed.

**Annex 1**

**List of participants**

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| **First Name** | **Last Name** | **Job Title** | **Company** | **Country** |
| Alfredo | Bermudez-Salazar | Rapid Deployment ICT Coordinator | International Committee of the Red Cross | Switzerland |
| Andrea Romaoli | Garcia | Chair Malta FIBREE. International Lawyer | United Nations | United States |
| Bosen | Liu | CEO | Ladder Education Group | China |
| Charlyne | Restivo | Advisor | International Telecommunication Union | Switzerland |
| Emanuele | Nastri | Official | Ministry of Economic Development | Italy |
| Fatime | Ahmeti | Focus Group Assistant | International Telecommunication Union | Switzerland |
| Fukuya | Iino | Industrial Development Organisation | UNIDO | Austria |
| Jarkko | Vesa | CEO | Not Innovated Here | Finland |
| José Esteban | Gabarda Balaguer | Research | jose esteban gabarda balaguer | Spain |
| Kouraich | Gharsallaoui | Information System Engineer | International Telecommunication Union | Switzerland |
| Madhavan | Pallan | Researcher in AI | United Nations Research Institute for Social Development | Switzerland |
| Pan | Guanfu | Associate Research Fellow | National Institute of Metrology, China | China |
| Rodrigo | Paula | Technical of Regulation | Agência Nacional de Telecomunicações - ANATEL | Brazil |
| Rosario | Galvan | Sustainable & Inclusive Development | Rosario Galvan | Spain |
| Rüdiger | Dr.Iur.Stix,Phd., | Hon.Professor & MinR | DX-Danube Excellence | Austria |
| Rumeng | Tan | Director | China Telecommunications Corporation | China |
| Stefano | Nativi | Big Data Lead Scientist | European Commission - JRC | Belgium |
| Tony | Lee Luen Len | Partner | Ecosis | Mauritius |
| Vimal | Wakhlu |  | ITU-APT Foundation of India | India |
| Ying | Shi | Project Manager | China Telecommunications Corporation | China |
| Zhangwei | Chen | Junior Officer | Tsinghua University | China |

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