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| ITU Logo | INTERNATIONAL TELECOMMUNICATION UNION**TELECOMMUNICATIONSTANDARDIZATION SECTOR**STUDY PERIOD 2017-2020 | FG-AI4H-H-040 |
| **ITU-T Focus Group on AI for Health** |
| **Original: English** |
| **WG(s):** | Plenary | Brasilia, 22-24 January 2020 |
| **DOCUMENT** |
| **Source:** | FG-AI4H Chairman |
| **Title:** | Draft LS/r on invitation to review Artificial Intelligence Standardization Roadmap and provide missing or updated information ([SG13-LS118](https://www.itu.int/ifa/t/2017/ls/sg13/sp16-sg13-oLS-00118.zip)) [to ITU-T SG13] |
| **Purpose:** | Discussion |
| **LIAISON STATEMENT(Ref: TBD)** |
| **For action to:** | ITU-T SG13 |
| **For comment to:** | - |
| **For information to:** | - |
| **Approval:** | **ITU-T FG-AI4H meeting (Brasilia, 23 January 2020)** |
| **Deadline:** | 24 February 2020 |
| **Contact:** | Thomas WiegandChair, FG-AI4HHHI Fraunhofer, Germany | E-mail: thomas.wiegand@hhi.fraunhofer.de |

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| **Abstract:** | This reply LS provides SG13 with information about the FG-AI4H and its planned deliverables. |

The ITU/WHO Focus Group on artificial intelligence for health (**FG-AI4H**) thanks ITU-T SG13 on its LS with invitation to review Artificial Intelligence Standardization Roadmap and provide missing or updated information (your reference: [SG13-LS118](https://www.itu.int/ifa/t/2017/ls/sg13/sp16-sg13-oLS-00118.zip); our reference: [FGAI4H-H-024](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-024.docx))

The FG-AI4H was created under SG16 in July 2018 and works in partnership with the World Health Organization (WHO) to establish a **standardized assessment framework for the evaluation of AI-based methods for health, diagnosis, triage or treatment decisions**. The group currently has 15 topic areas and six working groups (see Annex A). More topic areas are added with new meetings and provide an opportunity for regional interests to benefit from the work of the FG.

The currently planned deliverables are listed in Table 1.

The FG-AI4H looks forward to cooperating with ITU-T SG13 and all other groups relevant to AI4H standardization.

Table 1 – FG-AI4H list of planned deliverables (January 2020)

| No. | Deliverable | Initial draft editor |
| --- | --- | --- |
| 1 | AI4H ethics considerations | Andreas Reis (WHO), Julia Mohapatra (NICF, India) |
| 2 | AI4H regulatory [best practices | considerations] | Jackie Ma (Franhofer HHI, Germany) |
| 3 | AI4H requirements specification | Pradeep Balachandran, Tina Purnat (WHO) |
| 4 | AI software life cycle specification | Pat Baird (Philips, USA), Tina Purnat (WHO) |
| 5 | Data specification | Marc Lecoultre (ML Lab, Switzerland) |
| 5.1 | Data requirements | Gupta Saurabh (AIIMS, India), Manjula Singh (ICMR, India) |
| 5.2 | Data acquisition  | Rajaraman (Giri) Subramanian (Calligo Tech, India), Vishnu Ram (India) |
| 5.3 | Data annotation specification  | Shan Xu (CAICT, China), Harpreet Singh (ICMR, India) |
| 5.4 | Training and test data specification  | Luis Oala (Franhofer HHI, Germany), Pradeep Balachandran (India) |
| 5.5 | Data handling  | Marc Lecoultre (ML Lab, Switzerland) |
| 5.6 | Data sharing practices | Ferath Kherif (CHUV, Switzerland), Banusri Velpandian (ICMR, India), WHO Data Team |
| 6 | AI training best practices specification | Ma Su Su and Stefan Winkler (AI Singapore) |
| 7 | AI4H evaluation specification | Markus Wenzel (Fraunhofer HHI, Germany) |
| 7.1 | AI4H evaluation process description | Sheng Wu (WHO) |
| 7.2 | AI technical test specification | Auss Abbood (Robert Koch Institute, Germany) |
| 7.3 | AI technical test metric specification | Luis Oala (Fraunhofer HHI, Germany) |
| 7.4 | Clinical validation | Naomi Lee (Lancet, UK), Manjula Singh (ICMR, India), Rupa Sarkar (Lancet, UK) |
| 8 | AI4H scale-up and adoption | Sameer Pujari (WHO) |
| 9 | AI4H applications and platforms | Manjeet Chalga (ICMR, India), Aveek De (CMS, India) |
| 9.1 | Mobile applications | Khondaker Mamun (UIU, Bangladesh), Manjeet Chalga (ICMR, India) |
| 9.2 | Cloud-based AI applications | Khondaker Mamun (UIU, Bangladesh) |
| 10 | AI4H use cases: Topic description docs. | Eva Weicken (Fraunhofer HHI, Germany) |
| 10.1 | Cardiovascular disease risk prediction (TG-Cardio) | Benjamin Muthambi (Watif Health, South Africa) |
| 10.2 | Dermatology (TG-Derma) | Maria Vasconcelos (Fraunhofer Portugal) |
| 10.3 | Diagnosis of bacterial infection and anti-microbial resistance (TG-Bacteria) | Nada Malou (MSF, France) |
| 10.4 | Falls among the elderly (TG-Falls) | Inês Sousa (Fraunhofer Portugal) |
| 10.5 | Histopathology (TG-Histo) | Frederick Klauschen (Charité Berlin, Germany) |
| 10.6 | Malaria detection (TG-Malaria) | Rose Nakasi (Makerere University, Uganda) |
| 10.7 | Maternal and child health (TG-MCH) | Raghu Dharmaraju (Wadhwani AI, India), Hafsa Mwita (University of Zanzibar, Tanzania) |
| 10.8 | Neurological disorders (TG-Neuro) | Marc Lecoultre (ML Labs, Switzerland) |
| 10.9 | Ophthalmology (TG-Ophthalmo) | Arun Shroff (MedIndia) |
| 10.10 | Outbreak detection (TG-Outbreaks) | Stéphane Ghozzi (Robert Koch Institute, Germany) |
| 10.11 | Psychiatry (TG-Psy) | Nicolas Langer (ETH Zurich, Switzerland) |
| 10.12 | Radiotherapy (TG-Radiotherapy) | Joe Wu (Biomind, China) |
| 10.13 | Snakebite and snake identification (TG-Snake) | Rafael Ruiz de Castaneda (UniGE, Switzerland) |
| 10.14 | Symptom assessment (TG-Symptom) | Henry Hoffmann (Ada Health, Germany) |
| 10.15 | Tuberculosis (TG-TB) | Manjula Singh (ICMR, India) |
| 10.16 | Volumetric chest CT (TG-DiagnosticCT) | Kuan Chen (Infervision, China) |
| 10.17 | Dental diagnostics and digital dentistry (TG-Dental) | Falk Schwendicke and Joachim Krois (Charité Berlin, Germany) |
| 10.18 | Falsified Medicine (TG-FakeMed) | Frank Verzefé (TrueSpec-Africa, DRC) |

Annex A
Information about the FG-AI4H

The group has been meeting physically approximately every 2 months and its meetings are preceded by a one-day workshop. The aim of these workshops was  to provide a platform for researchers, engineers, practitioners, entrepreneurs and policy makers to discuss standardization opportunities for the assessment of AI for health solutions and to identify use cases and data required for the evaluation and validation with open benchmarks.

Eight meetings & workshops were held so far (Geneva, New York, Lausanne, Shanghai, Geneva, Zanzibar, New Delhi, Brasilia).

Participation in the FG-AI4H is free of charge and open to all who come from a country that is an ITU member. This includes both segments (workshop on day 1 and the technical deliberations on the subsequent days). This is a great opportunity for the AI and health community in Brazil and other Latin-American countries to become aware and hopefully involved in the thematic work of the FG-AI4H.

The FG scope and general process are described in a [commentary in The Lancet](https://doi.org/10.1016/S0140-6736%2819%2930762-7) and a [white paper](https://www.itu.int/en/ITU-T/focusgroups/ai4h/Documents/FG-AI4H_Whitepaper.pdf). An [onboarding guide](https://itu.int/en/ITU-T/focusgroups/ai4h/Documents/ITU_WHO_AI4H_Onboarding.pdf) has been prepared for helping new experts join the group. The documentation of all previous meetings can be found on the [collaboration site](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/SitePages/Home.aspx).

FG-AI4H structure

FG-AI4H [Topic Groups](https://www.itu.int/en/ITU-T/focusgroups/ai4h/Pages/tg.aspx) (18 as of November 2019)

* Cardiovascular disease risk prediction (TG-Cardio)
* Dermatology (TG-Derma)
* Falls among the elderly (TG-Falls)
* Histopathology (TG-Histo)
* Malaria detection (TG-Malaria)
* Neurological disorders (TG-Neuro)
* Ophthalmology (TG-Ophthalmo)
* Outbreak detection (TG-Outbreaks)
* Psychiatry (TG-Psy)
* Snakebite and snake identification (TG-Snake)
* Symptom assessment (TG-Symptom)
* Tuberculosis (TG-TB)
* Volumetric chest computed tomography (TG-DiagnosticCT)
* *Diagnoses of bacterial infection and anti-microbial resistance (AMR) (TG-Bacteria)*
* *Dental diagnostics and digital dentistry (TG-Dental)*
* *AI-based detection of falsified medicine (TG-FakeMed)*
* *Maternal and child health (TG-MCH)*
* *Radiotherapy (TG-Radiotherapy)*

FG-AI4H [Working Groups](https://www.itu.int/en/ITU-T/focusgroups/ai4h/Pages/wg.aspx):

* Data and AI solution assessment methods (WG-DAISAM)
Chair: Pat Baird (Philips)
Vice-chair: Luis Oala (Fraunhofer HHI, DE)
* Data and AI solution handling (WG-DASH)
Chair: Marc Lecoultre (MLlab.AI, CH)
Vice chair: Ferhat Kerif (CHUV, CH)
* Operations (WG-O)
Chair: Markus Wenzel (Fraunhofer HHI, Germany)
* Regulatory considerations on AI for health (WG-RC)
Chair: Naomi Lee (The Lancet, UK)
Vice-chairs:
	+ Paolo Alcini (European Medicines Agency, EU)
	+ Chandrashekar Ranga
	(CDSCO, India)
	+ Khair ElZarrad (FDA, USA)
	+ Wolfgang Lauer (Federal Institute for Drugs and Medical Devices, Germany)
	+ Peng Liang (National Medical Products Administration, China)
* WG on ethical considerations (WG-Ethics)
Chair: Andres Reis (WHO)
* Under preparation:
	+ WG on Clinical Evaluation (WG-CE)

FG-AI4H management

**Chairman:**

* Thomas Wiegand (Fraunhofer HHI, Germany)

**Vice-Chairmen:**

* Stephen Ibaraki (ACM and REDDS Capital, USA)
* Ramesh Krishnamurthy (WHO/Health Metrics and Measurement Cluster)
* Naomi Lee (The Lancet, UK)
* Sameer Pujari (Be Healthy Be Mobile Initiative and Digital Health and Innovations)
* Manjula Singh (ICMR, India)
* Shan Xu (CAICT, China)

**Secretariat:**

* Simão Campos, Bastiaan Quast, Ayda Dabiri, Kaoru Banno
at tsbfgai4h@itu.int

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