Overview of LITD 30, Stages of development of standard and under development documents of JTC 1/SC 42

Stages of development of ISO/IEC Deliverables (https://www.iso.org/deliverables-all.html)

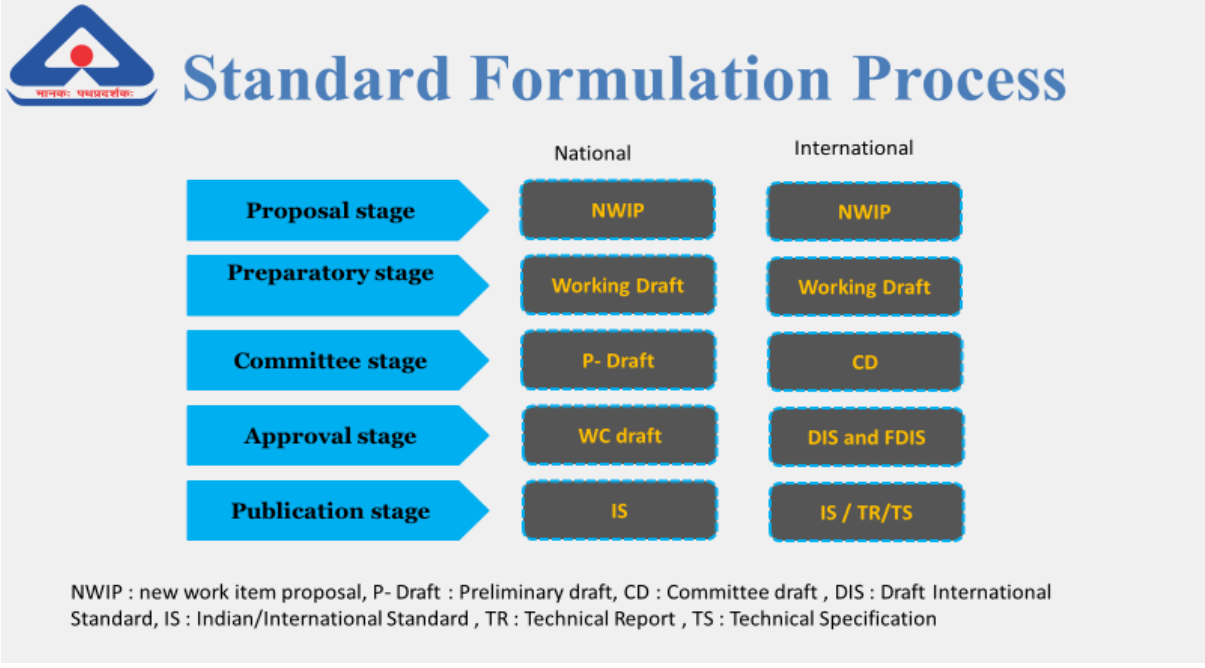
- NWIP/NP: Proposal is circulated to all Members for their inputs (https://www.iso.org/committee/6794475.html?view=participation).
- Once Majority of Member countries approves the development of the standard as per the NWIP, the Working Draft (WD) is developed in Working Group.
- At **working group level, experts registered in the working group are expected to participate in the development of WD**.
- In subsequent stages i.e. CD, DIS, FDIS/DTR/DTS; documents are circulated to all Member countries for their inputs. **At this level Member countries provide their opinion on the drafts through their National Mirror Committees**.

For ISO/IEC JTC 1/SC 42 "Artificial Intelligence", **LITD 30 "Artificial Intelligence" is the corresponding National Mirror Committee**

LITD 30 Composition
-https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/dgdashboard/committee_sso/composition/386/2

Standards published/under development by LITD 30:

https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/pow_details



PWI (Preliminary work item) – This is a study which may lead to NWIP.

ISO/IEC JTC 1/SC 42 “Artificial Intelligence” Sub-groups

ISO/IEC JTC 1/SC 42/JWG 2	Joint Working Group ISO/IEC JTC1/SC 42 - ISO/IEC JTC1/SC 7 : Testing of AI-based systems	Working group (WG)
ISO/IEC JTC 1/SC 42/JWG 3	Joint Working Group ISO/IEC JTC1/SC42 - ISO/TC 215 WG : AI enabled health informatics	Working group
ISO/IEC JTC 1/SC 42/JWG 4	Joint Working Group ISO/IEC JTC1/SC42 - IEC TC65/SC65A: Functional safety and AI systems	Working group
ISO/IEC JTC 1/SC 42/JWG 5	Joint Working Group ISO/IEC JTC1/SC42 - ISO/TC 37 WG: Natural language processing systems	Working group
ISO/IEC JTC 1/SC 42/JAG	Joint Advisory Group on AI and sustainability with ISO/IEC JTC1/SC 39 and JTC1/SC 42	Working group
ISO/IEC JTC 1/SC 42/JWG	Joint Working Group with ISO CASCO to develop the project ISO/IEC NP 25336 “Information technology -- Artificial intelligence -- High-level framework and guidance for the development of conformity assessment schemes for AI systems”	Working group
ISO/IEC JTC 1/SC 42/WG 1	Foundational standards	Working group
ISO/IEC JTC 1/SC 42/WG 2	Data	Working group
ISO/IEC JTC 1/SC 42/WG 3	Trustworthiness	Working group
ISO/IEC JTC 1/SC 42/WG 4	Use cases and applications	Working group
ISO/IEC JTC 1/SC 42/WG 5	Computational approaches and computational characteristics of AI systems	Working group

nder Development Standards JTC 1/SC 42

https://www.iso.org/committee/6794475/x/catalogue/p/0/u/1/w/0/d/0

S. No.	ISO/IEC No. & Title	JTC 1/SC 42 Working Group	Status/Stage	Scope/Remarks	Indian Experts volunteered to contribute/contributing
1	ISO/IEC AWI 42102 Taxonomy of AI system methods and capabilities	WG 1	WD	This document provides guidance on the classification of AI system by describing a taxonomy of methods and capabilities. The taxonomy enables AI stakeholders to describe and have a common understanding of an AI system. This document applies to all types of organizations involved in any of the lifecycle stages of AI systems as well as to any AI stakeholder roles.	a) Volunteered to contribute however, not yet member of LITD 30 or SC 42/WG: Mr. Anant Bhaskar Garg

2	ISO/IEC 22989:2022/AWI Amd 1 Information technology — Artificial intelligence — Artificial intelligence concepts and terminology — Amendment 1	WG 1	WD	Amendment is related to Generative AI aspects	a) Volunteered to contribute however, there is no further update related to contribution: Dr Asif Ekbal (IIT, Patna) Dr. Shrikant Bhat Mr. Raghavendra Bhat (Intel) Mr Syed Ahmed (Infosys) b) Contributing: Dr. C Anantaram
3	ISO/IEC 23053:2022/AWI Amd 1 Framework for Artificial Intelligence (AI) Systems Using Machine Learning (ML) — Amendment 1	WG 1	WD	Amendment is related to Generative AI aspects	a) Volunteered to contribute however there is no further update related to contribution: Mr. Raghavendra Bhat (Intel) Mr Syed Ahmed (Infosys) Dr. Shrikant Bhat b) Contributing: Dr. C Anantaram

4	ISO/IEC AWI 24970 Artificial intelligence — AI system logging	WG 1	WD Stage	This document describes common capabilities, requirements and a supporting information model for logging of events in AI systems. This document is designed to be used with a risk management system.	Contributing: Mr. Kshitij Bathla
5	ISO/IEC CD TR 5259-6 - Artificial intelligence — Data quality for analytics and machine learning (ML) — Part 6: Visualization framework for data quality	WG 2	CD however, DTR ballot is expected soon	This document describes a visualization framework for data quality in analytics and machine learning. The aim is to enable stakeholders using visualization methods to assess the results of data quality measures. This visualization framework supports data quality goals	a) Volunteered to contribute however, there is no further update related to contribution: Dr Anantha Desik (TCS)

6	ISO/IEC AWI TR 42103 Information technology – Artificial intelligence – Overview of synthetic data in the context of AI systems	WG 2	WD	This document provides an overview of synthetic data concepts, methods, uses and considerations in the context of AI systems.	a) Volunteered to contribute however, there is no further update related to contribution: Dr Gargi Keeni Dr Anantha Desik (TCS) Mr Syed Ahmed (Infosys)
7	Technical Specification - "NP - Artificial Intelligence — Implementation guidance on de-identification of data used in Machine Learning (ML)"	WG 2	NP ballot expected soon.	This is India's Proposal.Mr Srinivas P is the Project Editor. This has been recommended for the NP ballot.	

88	Technical Report- Information technology — Artificial intelligence — Overview of data profiles for analytics and ML	WG 2	WD		
9.	Proposed Form4 and outline "NP - Artificial intelligence — Machine learning (ML) model description framework"	WG 2	WD		

10.	ISO/IEC AWI TS 22443 Information technology -- Artificial intelligence — Guidance on addressing societal concerns and ethical considerations	WG 3	WD	This document provides guidance on how an organization can identify and address societal concerns and ethical considerations during the life cycle of AI systems that can potentially harm individuals and society. The document expands existing AI system governance, management system and impact assessment standards. This document is applicable to all types of organizations that develop or use AI systems, regardless of size, type and nature.	a) Volunteered to contribute however, there is no further update related to contribution: Dr Gargi Keeni Mr. Sitarama Brahmam Gunturi (TCS) Mr. Javed Akhtar (EIL) b) Contributing: Mr. Srinivas Poosarla (Infosys) Mr Sridharan Sankaran (TCS) **c) Volunteered to contribute however, not yet member of LITD 30 or SC 42/WG:** Mr Anant Bhaskar Garg N. Kishor Narang (Narnix)

11	ISO/IEC AWI 24029-3 Artificial intelligence – Assessment of the robustness of neural networks — Part 3:Methodology for the use of statistical methods	WG 3	WD	This document provides methodology for the use of statistical methods to assess robustness properties of neural networks. The document focuses on how to select, apply and manage statistical methods to assess robustness properties.	a) Volunteered to contribute however there is no further update related to contribution: Mr Ramesh Balaji (TCS) b) Contributing: Dr C. Anantaram c) Volunteered to contribute however, not yet member of LITD 30 or SC 42/WG: Mr Sundar. Narayanan
12	ISO/IEC AWI 42105 Artificial intelligence — Guidance for human oversight of AI systems	WG 3	WD	This document provides guidance on human control and monitoring of AI systems, which is referredto as human oversight. This document extends ISO/IEC TS 8200, Controllability of automated artificial intelligence systems. This document is applicable to all types of organizations developing and using AI systems during their whole life cycle.	**a) Volunteered to contribute however there is no further update related to contribution:** Dr Gargi Keeni Mr Sridharan Sankaran (TCS) Mr Syed Ahmed (Infosys) **b) Volunteered to contribute however, not yet member of LITD 30 or SC 42/WG:** Mr Sundar. Narayanan

13	ISO/IEC TR AWI 42106 Artificial Intelligence — Overview of differentiated benchmarking of AI system quality characteristics	WG 3	WD , CD ballot is expected soon. This is India's proposal. Dr Nisheeth Srivastava (IIT, Kanpur) is project editor	This document provides an overview of conceptual frameworks for graded benchmarking of AI system quality characteristics. The aim is to examine the feasibility of using differentiated benchmarking of quality characteristics based on the complexity and context of use of an AI system.	
14	Revision of ISO/IEC AWI 25059 "Software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) — Quality models for AI systems.	WG 3	WD Stage	This document outlines quality models for AI systems and services and is an application specific extension to the standards on SQuaRE. The characteristics and sub-characteristics detailed in the models provide consistent terminology for specifying, measuring and evaluatingAI system and service quality. The characteristics and sub-characteristics detailed in the models also provide a set of quality characteristics against which stated quality requirements can be compared for completeness.	

15	Operational design domain (ODD) for AI systems	WG 3	PWI, NP ballot forTechnical specification ‘Terminology and concepts for domain engineering of AI systems’ is expected soon		
16	Technical Specification- "NP - Artificial Intelligence – Reliability assessment of AI systems"	WG 3	NP ballot expected soon.	This is India’s proposal and Dr C Anantram is Project Editor.	

17	Technical specification, Guidance on addressing risks in generative AI systems	WG 3	NP ballot expected soon		
18	Technical Specification - "NP - Artificial Intelligence - A Template for Documentation of ethical implications of an AI application"	WG 3	NP ballot expected soon		

19	ISO/IEC AWI 25029 Artificial intelligence — AI-enhanced nudging	WG 3	WD Stage	This standard applies to nudging mechanisms enhanced by AI systems. This document provides definitions, concepts, and guidelines to address AI-enhanced nudging mechanisms by organizations. This standard aims to support organizations to deal with AI-enhanced nudging mechanisms in alignment with existing AI standards. "AI-enhanced nudging mechanisms" are a sub category of digital nudges and which are enhanced by AI systems. It provides use-cases to illustrate AI-enhanced nudging mechanisms. It provides guidelines and requirements for designing responsible AI-enhanced nudging mechanisms. This includes horizontal processes and key indicators using specific vertical examples.	Volunteered to contribute however, not yet a member of LITD 30 or SC 42/WG: Mr Sundar. Narayanan
20	PWI 42117 Trustworthiness fact labels for AI systems	WG 3	PWI		

21	ISO/IEC CD TR 21221 Technical Report Information Technology — Artificial Intelligence — Beneficial AI systems,	WG 4	CD ballots closed,	This document describes the development of a conceptual framework to articulate the benefits of AI systems as perceived by a variety of stakeholders based on value and impact. The dimensions of benefits of AI systems include but are not limited to functional, economic, environmental, social, societal, cultural. The stakeholders include participants in the development of AI International Standards, users of International Standards, users and subjects of AI systems. Illustrations will include use cases of applications of AI systems from various industry sectors.	**a) Volunteered to contribute however there is no further update related to contribution:** Dr Gargi Keeni Dr Amit Sata (Marwadi Education Foundation) **c) Volunteered to contribute however, not yet member of LITD 30 or SC 42/WG:** Mr Anant Bhaskar Garg
22	Human-machine teaming	WG 4	Roadmapping item		**Contributing:** Mr Syed Ahmed (Infosys)

23	ISO/IEC AWI TR 42109 Information technology — Artificial intelligence — Use cases of human-machine teaming	WG 4	WD stage	This document provides the use cases of human-machine teaming, which refers to human interaction with machine intelligence capabilities to enable problem solving and successful task completion. The use cases represent the basic and multiple relationships, as well as evolution of relationships between human and machine (AI application).	
24	NP - Information technology – Artificial intelligence – Guidance on generative AI output data quality	WG 4	NP ballot expected soon. This is India's proposal. Dr Shrikant Bhat (ABB India) is project editor.		a) Volunteered to contribute however, there is no further update related to contribution: Dr Srinivas Rana (Wadhwani) Dr. Saikat Saha (Nasscom) b) Contributing: Mr Syed Ahmed (Infosys) Mr. Raghavendra Bhat (Intel India) Mr. Srinivas (Infosys)

25	NP - Information technology — Artificial intelligence — Framework for human-machine teaming	WG 4	NP ballot expected soon.		
26	ISO/IEC WD 4213 Artificial intelligence — Performance measurement for AI classification, regression, clustering and recommendation tasks	WG 5	WD ballot	This document specifies methodologies for measuring the performance of AI models for classification, regression, clustering and recommendation tasks.	

27	ISO/IEC AWI TS 42112 Information technology —Artificial intelligence —Guidance on machine learning model trainingefficiency optimisation	WG 5	WD Stage	This document describes the characteristics that impact machine learning model training efficiency and then provides the optimisation approaches that apply to these characteristics. This document provides AI providers and AI producers with a set of characteristics and the related optimisations that they can use to enhance their machine learning model training efficiency. AI providers and AI producers can also use this information to evaluate different machine learning model training approaches. This document does not specify any training accelerating mechanisms provided and implemented within machine learning computing device defined in ISO /IEC TR 17903 and its library. .	
28	ISO/IEC AWI TS 25258 Artificial intelligence — Hybrid AI inference framework for AI systems	WG 5	WD Stage	This document provides effective guidance for an AI inference framework for AI systems with multiple tasks to generate output in the deployment process.	Contributing: Mr. Raghavendra Bhat and Mr. Praveen GB

29	ISO/IEC AWI TS 42111 Information technology — Artificial intelligence — Guidance on lightweight AI systems	WG 5	WD Stage	This document provides guidance on developing and deploying lightweight AI systems optimized for limited resource utilization. The optimization approach for AI model training efficiency is not within the scope of the this document	Contributing: Mr. Raghavendra Bhat and Mr. Praveen GB
30	Potential proposal - Optimisation and deployment framework for deep learning models on edge computing devices	WG 5	Under discussion		Volunteered to contribute however, not yet member of LITD 30 or SC 42/WG: Dr. Anil Kr. Rose (Chandigarh college of Engineering)

31	ISO/IEC AWI TS 29119-11 Software and systems engineering — Software testing — Part 11: Testing of AI systems	JWG 2	WD	This document provides requirements and guidance on the application of the ISO/IEC/IEEE 29119 series to the testing of AI systems and interaction of their components. This document follows a risk-based approach and uses risks associated with AI systems, and their development and maintenance, to identify suitable test practices, approaches and techniques applicable to AI systems and their AI components. When the test practices, approaches and techniques are already specified in the ISO/IEC/IEEE 29119 series this document provides additional detail and describes their application in the context of AI systems.	**a) Volunteered to contribute however there is no further update related to contribution:** Mr. Ankit Jain (STQC) Ms. Anjali Jain (STQC) Mr Raja Balusamy (Samsung India) **b) Contributing:** Dr C. Anantaram (In Personal Capacity)
32	ISO/IEC CD TS 17847 Information technology — Artificial intelligence — Verification and validation analysis of AI systems	JWG 2	CD ballot, This is India's proposal. Mr Raghavendra Bhat (Intel India) is project editor.	This document describes approaches and provides guidance on processes for the verification and validation analysis of AI systems (comprising AI system components and the interaction of non-AI components with the AI system components) including formal methods, simulation and evaluation. This document is applicable for AI systems verification and validation in the context of the AI system life cyclestages described in ISO/IEC 22989. This document is applicable to all types of organizations engaged in the development, deployment and use ofAI systems	**Contributing:** Dr C. Anantaram (In Personal Capacity) Mr Kshitij Bathla (BIS) Mr Raghavendra Bhat (Intel India) Mr Sridharan Sankaran (TCS) Mr Raja Balusamy (Samsung India) Mr Praveen G B (Lytx India) Mr. Hrishikesh Karmakar (TCS)

33	ISO/IEC WD TR 18988 Application of AI technologies in health informatics	JWG 3	WD		**a) Volunteered to contribute however there is no further update related to contribution:** Dr Gargi Keeni Dr Avik Sarkar (In Personal Capacity) Ms. Anjali Jain (STQC) Dr Srinivas Rana (Wadhwani) **b) Contributing:** Mr Sridharan Sankaran (TCS)
34	ISO/IEC AWI 22989-2 Artificial intelligence — Concepts and terminology — Part 2: Healthcare	JWG 3	WD Stage		

35	ISO/IEC TS 22440 Artificial intelligence — Functional safety and AI systems — Requirements and Guidelines	JWG 4	WD	This document provides requirements and guidance on the terminology, properties, risk factors, processes, methods, techniques and architectures relating to: use of AI technology within a safety-related function; use of safety-related function based on conventional technology to ensure safety of a system using AI echnology; use of AI technology to design, develop and verify safety-related functions.This document includes general considerations on how security threats can affect safety of an AI system. Unless differently specified, this document is applicable to all types of AI technologies. It includes specific details on machine learning (ML).	**a) Volunteered to contribute however there is no further update related to contribution:** Dr Amit Sata (Marwadi Education Foundation) **b) Volunteered to contribute however, not yet member of LITD 30 or SC 42/WG:** Dr. Anil Kr. Rose (Chandigarh college of Engineering) Ms. Chitra Viswanathan Dr. Ankit Gupta

36	ISO/IEC AWI TS 22440-1 Artificial intelligence — Functional safety and AI systems — Part 1: Requirements	JWG 4	WD	This document provides requirements on the terminology, properties, risk factors, processes,methods, techniques and architectures relating to: - Use of AI technology within a safety-related function - Use of safety-related function based on conventional technology to ensure safety of a system using AI technology; - Use of AI technology to design, develop and verify safety-related functions. This document includes general considerations on how security threats can affect safety of anAI system. Unless differently specific, this document is applicable to all types of AI technologies. It includes specific details on machine learning (ML)	**a) Volunteered to contribute however there is no further update related to contribution:** Dr Amit Sata (Marwadi Education Foundation) **b) Volunteered to contribute however, not yet member of LITD 30 or SC 42/WG:** Dr. Anil Kr. Rose (Chandigarh college of Engineering) Ms. Chitra Viswanathan Dr. Ankit Gupta

37	ISO/IEC AWI TS 22440-2 Artificial intelligence — Functional safety and AI systems — Part 2: Guidance	JWG 4	WD	This document provides guidance on the terminology, properties, risk factors, processes, methods,techniques and architectures relating to: - Use of AI technology within a safety-related function - Use of safety-related function based on conventional technology to ensure safety of a system using AI technology; - Use of AI technology to design, develop and verify safety-related functions. This document includes general considerations on how security threats can affect safety of an AI system. Unless differently specific, this document is applicable to all types of AI technologies. It includesspecific details on machine learning (ML).	**a) Volunteered to contribute however there is no further update related to contribution:** Dr Amit Sata (Marwadi Education Foundation) **b) Volunteered to contribute however, not yet member of LITD 30 or SC 42/WG:** Dr. Anil Kr. Rose (Chandigarh college of Engineering) Ms. Chitra Viswanathan Dr. Ankit Gupta

38	ISO/IEC AWI TS 22440-3 Artificial intelligence — Functional safety and AI systems — Part 3: Examples of application	JWG 4	WD	This document provides examples of application on the terminology, properties, risk factors,processes, methods, techniques and architectures relating to: - Use of AI technology within a safety-related function - Use of safety-related function based on conventional technology to ensure safety of a system using AI technology; - Use of AI technology to design, develop and verify safety-related functions. This document includes general considerations on how security threats can affect safety of an AI system. Unless differently specific, this document is applicable to all types of AI technologies. Itincludes specific details on machine learning (ML).	**a) Volunteered to contribute however there is no further update related to contribution:** Dr Amit Sata (Marwadi Education Foundation) **b) Volunteered to contribute however, not yet member of LITD 30 or SC 42/WG:** Dr. Anil Kr. Rose (Chandigarh college of Engineering) Ms. Chitra Viswanathan Dr. Ankit Gupta
39	ISO/IEC AWI TS 25223 Artificial intelligence — Guidance and requirements for uncertainty quantification in AI systems	JWG 4	WD Stage	This document specifies general and technical guidance and requirements for the development and use of methods for the quantification of uncertainties in AI systems. This document defines fundamental terminology for uncertainty quantification in AI systems along with the characteristics of selected approaches to uncertainty quantification. The characteristics and approaches are then described through selected applications. This document describes aspects of quantification of uncertainties for all stages of the AI system life cycle.	

40	ISO/IEC AWI 23282 Artificial Intelligence — Evaluation methods for accurate natural language processing systems	JWG 5	WD	This document specifies the evaluation of natural language processing systems, in the sense of measuring the quality of a system's results to assess its functional suitability. It provides a definition of evaluation methods for those systems, together with guidance on how to select, implement and interpret them. This document covers quantitative metrics as well as other evaluation methods. It includes requirements on the implementation of the described metrics, and further requirements on the technical resources involved in the evaluation process.	**a) Volunteered to contribute however there is no further update related to contribution:** Dr Asif Ekbal (IIT, Patna) **b) Contributing:** Dr C. Anantaram Dr Mohammed Javed (IIITA) **c) Volunteered to contribute however, not yet member of LITD 30 or SC 42/WG:** Dr Pushpak Bhattacharya

41	ISO/IEC AWI TR 23281 Artificial intelligence — Overview of AI tasks and functionalities related to natural language processing	JWG 5	WD	This document discusses the concept of task in the case of AI applied to natural language, and proposes a landscaping of the AI tasks related to the analysis or generation of natural language, as well as other language-related functionalities that are associated to those AI systems. It identifies existing and competing terminologies,co-existing variants of the same tasks and functionalities, and how specific tasks can be affected by language diversity in terms of their role or their challenges. This includes all languages, dialects and variants spoken in Europe, whether official or not. The relations among tasks or functionalities, and their interactions within pipelines, are discussed and illustrated. In addition, the document provides references to existing standards and published guidelines associated to those tasks and functionalities, highlighting their differences in case of competing standards.	**a) Volunteered to contribute however there is no further update related to contribution:** Dr Asif Ekbal (IIT, Patna) **b) Contributing:** Dr C. Anantaram Dr Mohammed Javed (IIITA) **c) Volunteered to contribute however, not yet member of LITD 30 or SC 42/WG:** Dr Pushpak Bhattacharya