
P2955

Submitter Email: kannan@iitb.ac.in
Type of Project: New IEEE Standard
Project Request Type: Initiation / New
PAR Request Date: 12 Aug 2020
PAR Approval Date: 10 Feb 2021
PAR Expiration Date: 31 Dec 2025
PAR Status: Active

1.1 Project Number: P2955
1.2 Type of Document: Recommended Practice
1.3 Life Cycle: Full Use

2.1 Project Title: Recommended Practice for Creating Self Learning Tutorials and Side by Side Learning

3.1 Working Group: Enabling self learning in local language(C/LT/SLLL)
3.1.1 Contact Information for Working Group Chair:
Name: Kannan Moudgalya
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3.1.2 Contact Information for Working Group Vice Chair:
Name: Ramkumar Rajendran
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3.2 Society and Committee: IEEE Computer Society/Learning Technology(C/LT)
3.2.1 Contact Information for Standards Committee Chair:
Name: Richard Tong
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3.2.2 Contact Information for Standards Committee Vice Chair:
Name: James Goodell
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3.2.3 Contact Information for Standards Representative:
None

4.1 Type of Ballot: Individual
4.2 Expected Date of submission of draft to the IEEE SA for Initial Standards Committee Ballot:
Jan 2024
4.3 Projected Completion Date for Submittal to RevCom: Aug 2024

5.1 Approximate number of people expected to be actively involved in the development of this project: 10
5.2 Scope of proposed standard: This recommended practice describes a methodology for creating self-learning tutorials, including tutorials which use screencast technology. Methods and practices that are applicable to spoken tutorials are defined, including use of side-by-side learning techniques.
5.3 Is the completion of this standard contingent upon the completion of another standard? No
5.4 Purpose: To promote practices that help (1) produce self learning tutorials, (2) dub into many languages, and (3) reduce cognitive overload while learning.
5.5 Need for the Project: There is a great need globally for self-directed learning to enable a wide variety of content and educational materials to be developed and made available to students and adult learners. The wide availability of low cost computing devices, including tablets, together with audio and screen recording technologies can be used to meet this need.
5.6 Stakeholders for the Standard: Educators, policy makers

6.1 Intellectual Property
6.1.1 Is the Standards Committee aware of any copyright permissions needed for this project?
No
6.1.2 Is the Standards Committee aware of possible registration activity related to this project?
No

7.1 Are there other standards or projects with a similar scope? No
7.2 Is it the intent to develop this document jointly with another organization? No

8.1 Additional Explanatory Notes: Side-by-Side Learning is a method developed by IIT Bombay to reduce the cognitive overload while learning a software, and in some cases, learning software development and coding techniques, through Spoken Tutorials. In this approach, the learner does not maximize the Spoken Tutorial window, but shrinks it makes it fit on one side of the screen. On the other side of the screen, the software under question is open. This can always be done as the software is open source. One can then listen to a command, pause the tutorial, and try it out on the software. If it works, one can listen to the next command. If not, one can rewind the tutorial and listen to the command again. This will always work, as the Spoken Tutorial is created for self learning through the Novice Check of the underlying script. We have explained this approach in the following journal article.

El, Kk & Moudgalya, Kannan. (2016). Comparing the Effectiveness of Self-Learning Java Workshops with Traditional Classrooms. *Educational Technology & Society*. 19. 310-331.

The following Spoken Tutorial explains the side-by-side methodology.

<https://spoken-tutorial.org/watch/Spoken+Tutorial+Technology/Side+by+Side+Method/English/>