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WebRTC as a communication medium in an online virtual classroom for Moodle

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Abstract

In traditional learning, learners can interactively engage with the teacher and receive individual feedback and this process in return helps the teacher to better understand their audience and teach accordingly. But in usual e-learning environments, this is not the case. However, some institutes incorporate Virtual Classroom Environments in order to emulate a traditional classroom environment.

To emulate a Virtual Classroom Environment, Real Time Media Protocol server software are used. Since management of these software are costly, small institutes are unable to provide these Virtual Classroom Environments to their students.

Due to this reason, a solution is proposed incorporating WebRTC, a peer-to-peer communication medium on Web Browsers. A self-contained, serverless solution is introduced to a leading e-learning platform, Moodle as an Activity Plugin with WebRTC.

The proposed system was implemented and test results attested that analysis, design and implementation of the proposed solution was done in an effective manner.

Keywords:

Rich Internet Applications, E-Learning, WebRTC