Keynote Speech VII

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Reusability Measurement and Social Community Analysis from MOOC Content Users

Abstract: MOOC brings to higher education a new challenge and a potential big change. Although the concept of flipped classroom encourages students to look at video instructions before class, yet, high quality instructions are hard to create. Sharing learning materials via social network is a potential solution if proper tools are developed for instruction designers. The talk contains the results of a project awarded by Google, using Google technologies to create tools to help MOOC users via social network. The talk starts from an engineering approach to define the specification of Exchangeable Learning Objects (ELOs) and an Open Repository for exchanging materials and experiences. The goals include providing a set of metrics for similarity measurement, searching result ranking, diversity between two ELOs, and relevancy among ELOs. These metrics serve as a base for investigating the searchability and reusability of learning objects. The resulting tool on can further gather a topology of exchanging ELOs among MOOC content users. The topology not only forms an information flow, an on-line social community can be built. Measurements on the social community can be used to know what are the new popular knowledge areas, as well as the influencing MOOC authors. Contribution can be used in strategic planning for future MOOC development.

Short Bio: Timothy K. Shih is a Professor at the National Central University, Taiwan. He was the Dean of the College of Computer Science, Asia University, Taiwan and the Chairman of the CSIE Department at Tamkang University, Taiwan. Prof. Shih is a Fellow of the Institution of Engineering and Technology (IET). He is also the founding Chairman of the IET Taipei Local Network. In addition, he is a senior member of ACM and a senior member of IEEE. Prof. Shih joined the Educational Activities Board of the IEEE Computer Society. He was the founder and co-editor-in-chief of the International Journal of Distance Education Technologies, USA. He is the Associate Editor of IEEE Computing Now. And, he was the associate editors of the IEEE Transactions on Learning Technologies, the ACM Transactions on Internet Technology, and the IEEE Transactions on Multimedia. Prof. Shih was the Conference Co-Chair of the 2004 IEEE International Conference on Multimedia and Expo (ICME’2004). He has been invited to give more than 50 keynote speeches and plenary talks in international conferences, as well as tutorials in IEEE ICME 2001 and 2006, and ACM Multimedia 2002 and 2007. Prof. Shih’s current research interests include Multimedia Computing, Computer-Human-Interaction, and Distance Learning. He has edited many books and published over 500 papers and book chapters. Prof. Shih has received many research awards, including research awards from National Science Council of Taiwan, IHAS research award from Germany, HSSS award from Greece, Brandon Hall award from USA, the 2015 Google MOOC Focused Research Award, and several best paper awards from international conferences. Professor Shih was named the 2014 Outstanding Alumnus by Santa Clara University.