

Spoken Web: A Parallel Web for the Masses

SPEAKER

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ABSTRACT

In India and several other countries, the number of mobile phone subscribers far exceeds the number of personal computer users, and continues to grow at a much faster pace (it has already crossed the 450 million mark in India). We will present Spoken Web, an attempt to create a new world wide web, accessible over the telephone network, for the masses in these countries. The Spoken Web is based on the concepts of Hyperspeech and Hyperspeech Transfer Protocol that allow creation of “VoiceSites” and traversal of “VoiceLinks”. We describe a simple voice-driven application, which allows people, without any information technology background, to create, host, and access such VoiceSites, and traverse VoiceLinks, using a voice interface over the telephone. We present our experience from pilots conducted in villages in Andhra Pradesh and Gujarat. These pilots demonstrate the ease with which a semi-literate and non-IT savvy population can create VoiceSites with locally relevant content, including schedule of education/training classes, agricultural information, and professional services, and their strong interest in accessing this information over the telephone network. We describe several outstanding challenges and opportunities in creating and using a Spoken Web for facilitating exchange of information and conducting business transactions.

Speaker Biography

Manish Gupta is the Associate Director at IBM Research - India. He leads a team developing breakthrough technologies underlying innovation in Services, Software and Systems, and is co-leading the IBM Research activities across the world in the Mobile Web area. Previously, as a Senior Manager at the T. J. Watson Research Center, Manish led research on software for the IBM Blue Gene supercomputer and other Deep Computing platforms. He received a B. Tech. in Computer Science from IIT Delhi in 1987, a Ph.D. from the University of Illinois at Urbana-Champaign in 1992, and has worked with IBM since then. He has co-authored over 70 papers, with over 3000 citations in Google Scholar, in the areas of high performance compilers, parallel computing, and Java Virtual Machine optimizations, and has filed sixteen patents. Manish has received two Outstanding Technical Achievement Awards and the Gerstner Team Award for Client Excellence at IBM, and has been invited to give keynotes at

several international conferences and workshops. He was elected to the IBM Academy of Technology in 2008. IBM was awarded the 2008 National Medal of Technology and Innovation for the invention of the Blue Gene supercomputer by US President Barack Obama in October 2009.