Spoken Language Understanding: the Research/Industry Chasm

Roberto Pieraccini
IBM TJ Watson Research Center
Yorktown Heights, NY
USA
Email: rpieracc@us.ibm.com

Abstract

There is a manifest chasm between research and industry in the field of spoken language understanding. The research community underwent a massive effort to define, evaluate and improve the notion of language understanding for speech applications in the ATIS program, which ended in the mid 1990s. On the other side of the chasm there is industry, which started in the mid 1990s building commercial applications based on very simplified forms of language understanding, and evolved towards an industrial standard adopted by most vendors today. In the past couple of years we witnessed an evolution of the commecially deployed systems with an attempt at deploying statistical classification of utterances, which is still a very simple form of understanding. In the meantime, where has research on spoken language understanding gone? Is it a much too difficult problem? Is it considered a solved problem? Is it too application specific? Does industry really need natural spoken language understanding? How could industry benefit from research? While we are not able to give definite answers to some or all of these questions, we can perhaps try to read the current trends in the technology of language understanding , and see which unanswered questions the research community should try to address.