

A.L.I.C.E. – an ACE in Digitaland

Huma Shah
University of Westminster
Harrow School Computer Science
Middlesex, UK
H.W.Shah@westminster.ac.uk

Abstract

Artificial linguistic Internet computer entity, A.L.I.C.E. is considered head and shoulders above other artificial chatting entities, ACE in digitaland. Three times winner of Loebner's annual instantiation of Turing's Test for machine intelligence in 2000, 2001 and 2004 judged most human-like machine, A.L.I.C.E. was additionally gold medal champion in 2004, for most knowledgeable programme in ChatterBot Challenge and won bronze medal for most popular ACE.

As a modern Eliza, A.L.I.C.E. appears as a dark-haired blue-eyed female avatar, eperson. The programme's architecture contains a combinatory scheme including keyword matching, spell checker, grammatical parser, random sentence generator and case-based reasoning or next-neighbour classification. These features allow A.L.I.C.E. to correctly associate the sense of word 'live' to produce response about residential location when asked "where do you live?" and ask question about "subject" being "studied" when presented with "I study a lot" by Judge 1 in Loebner's 2004 Contest. However, as a discourse model, discourse features such as information exchange, disclosure of intentions, goals and desires are minimally exhibited in A.L.I.C.E.'s conversations.

A.L.I.C.E. type programmes appear on e-commerce Internet sites in a variety of roles; their use will continue to grow as more companies see their deployment as enhancing human-computer interaction while building brand awareness and increasing sales. ELBOT, Loebner's 2002 and ChatterBot's 2003 winner, is the underlying technology behind UK e-bank Cahoot's "any questions" query system, and Swedish furniture store IKEA's virtual customer service agent, recently considered by NY Wall Street Journal as most useful ACE.

As seen in both the Loebner Contests and ChatterBot Challenges, in unrestricted domains these programmes have a long way to go before they are able to constrain their artificial linguistic productivity to that which is meaningful and be deemed intelligent. Nonetheless, in single specialised e-domains ACE are succeeding and with speech-recognition augments will afford natural human-machine interaction.