DISC and DISC-2

Spoken Language Dialogue Systems and Components: Best practice in development and evaluation.

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By describing current best practice in the field, the DISC project and its continuation DISC-2 contribute to bringing spoken language dialogue systems and their components on the market faster, at lower cost, and with higher quality.

The DISC project

Spoken language dialogue systems (SLDSs) are a major step towards truly natural interactive systems that will enable humans to communicate with machines in much the same way as they communicate with one another. SLDS technology is now being generally recognised as robust and commercially interesting (see e.g. Business Week 15 February 1998).

Nevertheless, as in most quickly evolving fields, there are currently no easy answers to questions such as the following, which are being asked by large and increasing numbers of developers, deployers and customers of SLDSs and components for different languages:

"Are interactive speech technologies appropriate for the task I have in mind?"

"How can I assess whether a technology on offer has been produced according to current best practice?"

"How will users react when confronted with my envisioned SLDS?"

"Which of two SLDS components on offer is the better one for my purposes? What are the evaluation criteria I should use?"

"Which methods and tools should I use when constructing a dialogue manager? Is my project feasible? Which platforms are available?"

The DISC project was launched in June 1997 on the understanding that a detailed description of best practice methods and tools, together with a constant exchange with state-of-the-art theoretical and system-building work, can considerably speed up the uptake of SLDSs.

The DISC approach

To support end-users, deployers and developers in answering these and many other questions, DISC has performed an in-depth examination of a broad selection of state-of-the-art SLDSs and components, looking at the following *aspects:* speech recognition, speech generation, language understanding and generation, dialogue management, human factors, and systems integration.

The resulting data was analysed in order to identify current development and evaluation practices, focusing on system and component functionality and on methods, workflows and procedures of development and evaluation. A series of reports describing the findings are available at the DISC Advisory Panel website together with aspect-specific overviews of existing technologies.

After the current practice examination, DISC has proceeded to develop the following documentation:

• a series of best practice drafts for the aspects addressed;

• a series of reports on aspects evaluation;

• a toolbox of concepts and software tools in support of SLDS development and evaluation. The toolbox will help developers and technology deployers solve problems of speech synthesis evaluation, lexical coverage, speech interface functionality, how to develop a truly cooperative SLDS, and others.

These results will be available at the DISC-2 website from March 1999 onwards.

From DISC to DISC-2

The DISC-2 project continues the best practice work of DISC. DISC-2 is devoted to the testing, integration and packaging of results. Testing of contents and packaging will be done with developers and deployers from industry and research.

Business benefits

It is the aim to provide the tested and packaged DISC and DISC-2 results as a world wide web resource. This information resource will offer advise on best practice in the design of SLDSs and provide answers to questions application designers, developers, deployers or marketeers might have regarding the design and implementation of one of the most important natural interactive technologies of the future.

The DISC Advisory Panel

DISC-2 is achieving a unique grasp of the ensemble of issues that currently face a rapidly growing number of SLDS developers, deployers and end-user companies across the world. Established during DISC's first year, the DISC Advisory Panel has been a main factor in modifying and refining the DISC agenda, as well as in offering to the project access to systems, components and developers. The DISC Advisory Panel currently has 40 members from companies and research labs across the world. If you are interested in receiving early DISC-2 results and in helping to maximise the usability and relevance of their contents and presentation, you are cordially invited to join the DISC Advisory Panel. This will help DISC-2 make an even stronger impact on emerging dialogue engineering best practice standards.

How to join the Advisory Panel

To join the DISC Advisory Panel, you may 1) complete and return to ELSNET (coordinates below) the form attached to this brochure; 2) send an e-mail message to ELSNET; or 3) complete the 'Advisory Panel' form at http://www.
elsnet.org/disc/ap/joinAP.html

More information about DISC

Detailed information on DISC is available at:

http://www.elsnet.org/disc/

The DISC-2 website includes all publicly available DISC documents and software tools. Separate Advisory Panel pages contain restricted-access information on DISC-2 progress.

Sponsorships as well as advertisements for SLDSs and components are invited for the public DISC-2 pages.

DISC partners and people

- Natural Interactive Systems Laboratory (NIS) (coordinating partner)
  Science Park 10, Odense University,
  5230 Odense M, Denmark
  Phone: (+45) 65 57 35 44
  Fax: (+45) 63 75 72 24

  Niels Ole Bernsen, contact person
  (nob@nis.sdu.dk)
  Laila Dybkjær (laila@nis.sdu.dk)
  Saturnino Luz (luzs@acm.org)

Merete Bertelsen, DISC administration
(merete@nis.sdu.dk)

- Human-Machine Communication
  Department
  Centre National de la Recherche
  Scientifique (CNRS-LIMSI)
  Bâtiment 508, B.P. 133
  F-91403 Orsay Cedex, France
  Phone: +33 1 69 85 80 63
  Fax: +33 1 69 85 80 88

  Lori Lamel, contact person
  (lamel@limsi.fr)
  Patrick Paroubek (pap@limsi.fr)

- Institut für Maschinelle Sprachverarbeitung
  (IMS)
  Universität Stuttgart
  Azenbergstraße 12
  D-70174 Stuttgart, Germany
  Phone: +49 711 121 1373
  Fax: +49 711 121 1366

  Ulrich Heid, contact person
  (heid@ims.uni-stuttgart.de)
  Hans Kamp (kamp@ims.uni-stuttgart.de)
  Jan van Kuppevelt
  (kuppevelt@IMS.Uni-Stuttgart.de]

- Department of Speech, Music and Hearing
  Kungliga Tekniska Högskolan (KTH)
  Dr Kristinas v 31
  S-100 44 Stockholm, Sweden
  Phone: +4 68 790 7563
  Fax: +4 68 790 7854

  Inger Karlsson, contact person
  (inger@speech.kth.se)

- Vocalis Ltd
  Chaston House, Mill Court
  Great Shelford
  Cambridge CB2 5LD, UK
  Phone: +44 012 23 846177
  Fax: +44 012 23 846178

  Klaus Failenschmid, contact person
  (klaus@vocalis.com)

- Daimler-Chrysler AG
  F3M/S
  Wilhelm-Runge-Straße 11
  Postfach 2360
  D-89013 Ulm, Germany
  Phone: +49 731 505 2152
  Fax: +49 731 505 4105

  Paul Heisterkamp, contact person
  (heisterkamp@dbag.ulm.daimlerbenz.com)

- ELSNET
  Trans 10
  NL-3512 JK Utrecht, The Netherlands
  Phone: +31 30 253 6039
  Fax: +31 30 253 6000

  Steven Krauwer, contact person
  (s.krauwer@let.uu.nl)
  Mariken Broekhoven (elsnet@let.uu.nl)