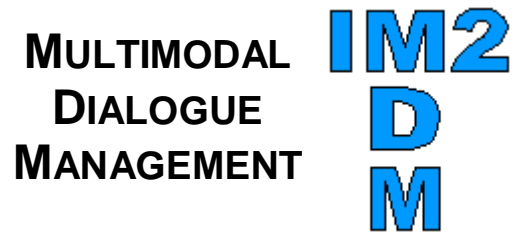




<http://www.im2.ch>



<http://www.issco.unige.ch/projects/im2/mdm/>

ISSCO/TIM/ETI, Université de Genève

**Resources, Tools and Projects for
Multimodal Dialogue Understanding and
Management: a Web-based Review**

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Report IM2.MDM-05 – June 2003

Resources, Tools and Projects for Multimodal Dialogue Understanding and Management: a Web-based Review

Plan of the report

1. Introduction
2. Conferences, tutorials and courses
3. Annotation guidelines and formats
4. Software tools, mainly for transcription and annotation
5. Corpora
6. Project descriptions

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1. Introduction

This report gathers resources related to multi-modal dialogue management. Resources are: conference material, courses, tutorials, project descriptions, annotation guidelines, data, and software tools. Each resource is described here giving the following fields: title, URL, type (organization, tool, corpus, etc.), dates (start, end, last release, etc.), abstract, and sometimes references. A complement to this document is report IM2-MDM-05 containing bibliographic references often related to the present entries.

The resources are grouped by organisational categories rather than by theme: the main theme is described in the report's title (multimodal dialogue understanding and management). Quite often the items in our review cover several subtopics.

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2. Conferences, tutorials and courses

TITLE	ESSLLI 2001 Course on Dialog Annotation
URL	http://purl.org/net/gor/esslli01/
TYPE	Course material
DATES	Summer 2001
ABSTRACT	Languages for the Annotation and Specification of Dialogues. Documents and resources of the course, by Gregor Erbach.

TITLE	ELSNET Summer School 2001 – Courses on Text and Speech Corpora
URL	http://ufal.ms.mff.cuni.cz/~ess2001/down.html
TYPE	Course material
DATES	Summer 2001

ABSTRACT	<p>Steven Bird, <i>Annotation graphs in theory and practice</i></p> <p>Lou Burnard, <i>Encoding of language corpora: principles and practice</i></p> <p>Henk van den Heuvel and Eric Sanders, <i>Validation of Speech Databases (including transcription)</i></p> <p>Amy Isard, Ole Bernsen and Laila Dybkjaer, <i>Dialogue corpora (MATE)</i></p> <p>Uli Tuerk, <i>Multimodal Corpora: Design, Technical Aspects and Handling</i></p> <p>Chalapathy Neti, Gerasimos Potamianos and Giri Iyengar, <i>Joint audio-visual speech processing and resources</i></p> <p>Geoffrey Sampson, <i>Annotation at the grammatical level</i></p> <p>Esther Grabe, <i>Prosodic annotation</i></p> <p>Jan Hajic, <i>Linguistic Annotation of a Large Corpus: From Morphology to Syntax</i></p>
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TITLE	CMU Graduate Seminar on Spoken Dialog Processing
URL	http://fife.speech.cs.cmu.edu/Courses/11716/ http://www-2.cs.cmu.edu/~aliceo/dialogpapers.html http://www-2.cs.cmu.edu/~aliceo/dialoglinks.html
TYPE	Course material, papers and hyperlinks
DATES	2000
ABSTRACT	Carnegie-Mellon University. A seminar by Alex Rudnicky, valuable for its list of readings that includes online versions of most of the articles. See also another site with papers for this seminar, as well as a comprehensive list of websites (with papers), both by Alice Oh.

TITLE	SIGdial – ACL Special Interest Group on Dialogue
URL	http://www.sigdial.org
TYPE	Organization
DATES	Permanent
ABSTRACT	SIGdial, among other activities, coordinates a library of discourse processing development tools, software, data, bibliographic references, publications, and links to related web pages. See especially their list of resources.

TITLE	SIGmedia – ACL Special Interest Group on Multimedia Language Processing
URL	http://www.sigmedia.org
TYPE	Organization
DATES	Permanent (since 1992)
ABSTRACT	SIGMEDIA promotes research which focuses on the use of natural language within the context of a multimedia environment. This includes: (1) the interpretation of multimodal input, (2) the generation of multimodal output, (3) multimedia information retrieval and (4) anthropomorphic conversational agents.

TITLE	SIGdial Workshops on Discourse and Dialogue
URL	http://www.sigdial.org/events/events.php?page=4
TYPE	Workshops, resources
DATES	2000-2003, ongoing
ABSTRACT	2 nd : Aalborg, Denmark, September 1-2, 2001 (just before Eurospeech 2001): http://www.sigdial.org/sigdialworkshop01/ 3 rd : Philadelphia, PA, USA, July 11-12, 2002 http://www.mlab.uiah.fi/~kjokinen/sigdial/ 4 th workshop Sapporo, Japan, 5-6 July 2003, in conjunction with ACL2003: http://www.speech.cs.cmu.edu/sigdial2003/

TITLE	Series of Workshops on the Semantics and Pragmatics of Dialogue
URL	http://www.cis.uni-muenchen.de/sil/workshop/dialogwsh.html (MunDial'97) http://parlevink.cs.utwente.nl/Conferences/twlt13.html (Twendial'98) http://earth.let.uva.nl/~amstelog/ (Amstelogue'99) http://www.ling.gu.se/gotalog (Gotalog'00) http://www.uni-bielefeld.de/BIDIALOG (Bidialog'01) http://www.ltg.ed.ac.uk/edilog/ (EDILOG 02)
TYPE	Workshops, resources
DATES	1997–2002
ABSTRACT	EDILOG 2002, 6th Workshop on the Semantics and Pragmatics of Dialogue, University of Edinburgh, Scotland, September 4-6, 2002. Previous workshops in this series include: MunDial'97 (Munich), Twendial'98 (Twente), Amstelogue'99 (Amsterdam), Gotalog'00 (Gothenburg), Bidialog'01 (Bielefeld).

TITLE	International CLASS Workshop on Natural, Intelligent and Effective Interaction in Multimodal Dialogue Systems
URL	http://www.class-tech.org/events/NMI_workshop2.html http://www.class-tech.org/events/NMI_workshop2/papers/
TYPE	Workshop, resources
DATES	June 28-29, 2002
ABSTRACT	Copenhagen, Denmark

TITLE	Dagstuhl Seminar 2001: Coordination and Fusion in Multimodal Interaction
URL	http://www.dfki.de/~wahlster/Dagstuhl_Multi_Modality/
TYPE	Research seminar, documentation (slides)
DATES	2001

ABSTRACT	Slides and conclusions of an important four day research seminar. Slides of Working Groups available: (1) Research Roadmap of Multimodality, (2) Data Collection and Multimodal Annotation Tools, (3) Software Architectures for Multimodal Systems, (4) Multimodal Meaning Representation
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TITLE	NIST Automatic Meeting Transcription Data Collection and Annotation Workshop
URL	http://www.nist.gov/speech/test_beds/mr_proj/
TYPE	Presentations/slides
DATES	November 2, 2001
ABSTRACT	Initial informal workshop held at NIST to explore a collaboration among sites collecting meeting room corpora. The workshop addressed issues in data collection and annotation approaches, data sharing, common annotation standards and tools, and distribution of corpora. Great enthusiasm was expressed by all of the sites to create a collaborative project where data could be shared via a set of common standards. The following presentation slides in PDF are available: "NIST Automatic Meeting Transcription Project", "Meeting Data Collection at CMU/ISL", "The Meeting Recorder Project at ICSI", "MITRE's Work Relevant to Meeting Room Data Collection/Annotation", "LDC Meeting Transcription, Parameters and Progress", "Univ. of Washington's Meeting Data Collection Effort".

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3. Annotation guidelines and formats

TITLE	MATE Supported Coding Schemes (deliverable D1.1)
URL	http://mate.nis.sdu.dk/about/D1.1/ http://www.dfki.de/mate/d11/annex.html
TYPE	Project Report
DATES	July 1998
ABSTRACT	See especially the ANNEX, which provides a list of all the schemes, by domain. The most relevant to IM2.MDM is the Dialog Act coding and the Coreference coding. 1/ Communication Problems: Bethan L. Davies' Coding Scheme, Chat, Odense University Scheme, SWBD-DAMSL. 2/ Coreference Schemes: Bruneseaux and Romary, DRAMA, MUC-7 Coreference Task, Poesio and Vieira (1,2), UCREL Anaphoric Annotation, *-U Line. 3/ Dialogue Act Schemes: Alparon, Chiba Coding Scheme, Chat, Coconut, Condon and Cech's Coding Scheme, C-Star, DAMSL, Janus, Flammia's Coding Scheme, LinLin, Maptask, Nakatani et al.'s Coding Scheme, SLSA, SWBD-DAMSL, Traum's Coding Scheme, Verbmobil. 4/ Morpho-Syntactical Schemes. 5/ Prosody Schemes: PROSPA, IPA, TEI, ToBI, SAMPA, SAMPROSA, INTSINT, SAMSINT, IPO, TSM, TILT Model, Verbmobil, KIM, PROZODIAG, Göteborg. 6/ Cross-level Schemes: BNC, Bonn Focus Research, CHILDES, DAMSL, Kiel

	Corpus Format, Partitut Format at BAS, SABLE, SAM Standards, TEI, TRAINS Dialogue Corpus, Verbmobil II Conventions for Spontaneous Speech.
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TITLE	MATE Dialogue Annotation Guidelines (deliverable D2.1)
URL	http://www.ims.uni-stuttgart.de/projekte/mate/mdag/ http://www.andreasmengel.de/pubs/mdag.pdf
TYPE	Annotation scheme
DATES	January 2000
ABSTRACT	The annotation scheme proposed in the MATE project deals with the following phenomena or "levels": prosody, morpho-syntax, dialogue acts, coreference, communication problems. A cross-level analysis is also provided. The MATE workbench uses this annotation scheme.
REF	A. Mengel, L. Dybkjaer, J.M. Garrido, U. Heid, M. Klein, V. Pirrelli, M. Poesio, S. Quazza, A. Schiffrin & C. Soria 2002, <i>MATE Dialogue Annotation Guidelines</i> , Deliverable 2.1 of the MATE Project LE4-8370, 8 Jan 2000.

TITLE	MATE Workbench
URL	http://www.cogsci.ed.ac.uk/~dmck/MateCode/
TYPE	Annotation software
DATES	Version 0.18, 26 June 2001, demo
ABSTRACT	"Early demo version" of the MATE annotation tool for spoken dialogue transcription. See separate entries for the MATE project and its guidelines.

TITLE	AGTK: Annotation Graphs Toolkit
URL	http://agtk.sourceforge.net/
TYPE	Software
DATES	2000
ABSTRACT	Annotation Graphs are a formal framework for representing linguistic annotations of time series data. Annotation Graphs abstract away from file formats, coding schemes and user interfaces, providing a logical layer for annotation systems. The package is provided with several annotation tools, such as TableTrans and MultiTrans.
REF	Bird Steven and Mark Liberman 2001, "A formal framework for linguistic annotation", <i>Speech Communication</i> , 33 , 1-2, p. 23-60. http://arxiv.org/abs/cs/0010033

TITLE	ATLAS: Architecture and Tools for Linguistic Analysis Systems
URL	http://www.nist.gov/speech/atlas/

TYPE	Annotation Framework: Guidelines, Software
DATES	Started 2000, updated 2003
ABSTRACT	<p>ATLAS (an initiative involving NIST, LDC and MITRE) is aimed at corpus construction, evaluation infrastructure, and multi-modal visualization, with a focus on the development of linguistic applications. The main goal is to provide an abstraction over the diversity of linguistic annotations (rooted in the `Annotation Graphs`).</p> <p>ATLAS is made of four main components: an annotation ontology, an Application Programming Interface, an interchange format for linguistic data and a type definition infrastructure.</p> <p>NIST has created a Java instantiation of the data model and provides an Application Programming Interface (jATLAS). Linguistic data expressed using ATLAS can be serialized to XML using the ATLAS Interchange Format (AIF).</p>
REF	<p>Bird Steven, David Day, John Garofolo, John Henderson, Christophe Laprun and Mark Liberman 2000, "ATLAS: A flexible and extensible architecture for linguistic annotation", <i>Proceedings LREC 2000 (Second International Conference on Language Resources and Evaluation)</i>, Athens, Greece, volume III/III, p. 1699-1706.</p> <p>http://arxiv.org/abs/cs/0007022</p>

TITLE	Multiparty Discourse Group / DAMSL
URL	http://www.cs.rochester.edu/research/cisd/projects/
TYPE	Organization
DATES	Up to 2001 (?)
ABSTRACT	<p>The Multiparty Discourse Group, a multi-site group of which the University of Rochester is a member, is part of the Discourse Resource Initiative (DRI). The goal of the Multiparty Discourse Group is to devise a common high-level framework of dialog acts. The group also provides the DAT annotation tool.</p>

TITLE	Meeting Recorder Annotation Guidelines for Dialog (ICSI, Berkeley)
URL	<p>http://www.icsi.berkeley.edu/Speech/mr/mtgrcdrtrans.html (prosody, etc.)</p> <p>http://www.icsi.berkeley.edu/Speech/mr/docs/Draft5.pdf (dialogue acts)</p>
TYPE	Annotation Guidelines
DATES	August 2002
ABSTRACT	<p>Based on DAMSL for the dialogue acts annotation, these guidelines were adapted to multiparty dialogues in meetings</p>

TITLE	Verbmobil Dialogue Act Annotation
URL	<p>http://coral.lili.uni-bielefeld.de/~vmobil/vm-anno/vm-annotations.html</p> <p>http://www.dfki.de/cgi-bin/verbmobil/htbin/decode.cgi/share/VM-depot/FTP-SERVER/vm-reports/report-226-98.ps.gz</p> <p>http://www.dfki.de/~kipp/</p>

TYPE	Annotation guidelines
DATES	2000
ABSTRACT	<p>The first URL describes “Annotation Schemata in Verbmobil Phase II”.</p> <p>The second URL is a report on “Dialogue Acts in VERBMOBIL-2”, which defines the second edition of dialogue acts, not only for appointment scheduling dialogues, but also for travel planning in general.</p> <p>The third URL is the web page of one of the main contributors to the dialog act annotation, Michael Kipp (see his publications).</p> <p>See also the entry for Verbmobil under 'Projects'.</p>

TITLE	EXMARaLDA
URL	http://www.rrz.uni-hamburg.de/exmaralda/index.html
TYPE	Annotation Guidelines
DATES	Version 1.2.4, May 2003
ABSTRACT	<p>XML-based system for transcribing and annotating spoken discourse on the computer. The acronym means "EXtensible MARkup Language for Discourse Annotation". The long term goal of the project is the implementation of a multilingual database of spoken discourse. The DTDs and some Java tools are available for download.</p>
REF	<p>Thomas Schmidt 2001, "The transcription system EXMARaLDA: An application of the annotation graph formalism as the Basis of a Database of Multilingual Spoken Discourse", <i>Proceedings of IRCS Workshop on Linguistic Databases</i>, Philadelphia, PA, USA, pp. 219-227.</p>

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4. Software tools, mainly for transcription and annotation

TITLE	LDC – Linguistic Annotation
URL	http://www ldc.upenn.edu/annotation/
TYPE	Repertoire of tools
DATES	Last updated: December 2001
ABSTRACT	<p>This web page describes tools and formats for creating and managing linguistic annotations. The focus is on tools which have been widely used for constructing annotated linguistic databases, and on the formats commonly adopted by such tools and databases.</p> <p>The basic data may be in the form of time functions (audio, video and/or physiological recordings) or it may be textual. The added notations may include transcriptions of all sorts (from phonetic features to discourse structures), part-of-speech and sense tagging, syntactic analysis, 'named entity' identification, co-reference annotation, and so on.</p>

TITLE	Transcriber, by ETCA/DGA (France) and LDC (USA)
URL	http://www.etca.fr/CTA/gip/Projets/Transcriber/
TYPE	Software, transcription/annotation tool
DATES	Latest version: 1.4.5, July 2002.
ABSTRACT	Transcriber assists the manual annotation of speech signals. It provides a user-friendly graphical interface for segmenting long duration speech recordings, transcribing them, and labelling speech turns, topic changes and acoustic conditions. It works on various Unix systems (Linux, Sun Solaris, Silicon Graphics) and Windows NT, and is freely distributed under the GNU GPL. The data is stored in a transparent XML format.

TITLE	SoundScriber
URL	http://www.lsa.umich.edu/eli/micase/soundscriber.html
TYPE	Software, transcription tool
DATES	1998
ABSTRACT	SoundScriber is a very simple freeware program <i>for Windows 95</i> . Besides normal playback features, it offers keystrokes to control the program while working in another window, variable speed playback, and "walking" (plays a small stretch of the file several times, then advances to a new piece, overlapping slightly with the previous one, such that it is possible to transcribe continuously without having to manually pause or rewind).

TITLE	VoiceWalker / SoundWriter
URL	http://www.linguistics.ucsb.edu/resources/computing/download/download.htm
TYPE	Software (playback for transcription)
DATES	Version 2.0, April 1999
ABSTRACT	VoiceWalker 1.1 is basically a glorified digital tape deck. It can step (or "walk") through a recording, repeating short overlapping segments for a specified number of repetitions, then moving on to the next segment. Works with WAV files, Windows AVI files and Quicktime MOV files. Windows 95/98. SoundWriter incorporates the ability to align transcripts with sound files.

TITLE	Anvil: A Tool for Annotation of Video and Spoken Language
URL	http://www.dfki.de/~kipp/anvil/
TYPE	Software
DATES	Version 4.0, April 2003
ABSTRACT	Anvil is a generic video annotation tool. Originally developed for Gesture Research, it has also proved suitable for research in the fields of Linguistics, Ethology, Anthropology, Psychotherapy, Human-Computer Interaction, Embodied Agents, Human-Computer Interaction (HCI) or Computer Animation.

	It offers frame-accurate, hierarchical multi-layered annotation with objects that contain attribute-value pairs. Layers and attributes are all user-defined, so that Anvil can accommodate arbitrary annotation schemes. Available from the author by email.
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TITLE	TASX-annotator – Time Aligned Signal data eXchange
URL	http://tasxforce.lili.uni-bielefeld.de/
TYPE	Software
DATES	Latest version: June 2002
ABSTRACT	The TASX-annotator is a central component of the TASX-environment, which allows the annotation and transcription of video (multi-channel) and audio data. Needs Java 2, Java Media Framework 2.1.1, saxon, xerces, PerlTools, jexmaralda (see above).

TITLE	MMAX: A Tool for Multi-Modal Annotation in XML
URL	http://www.eml.villa-bosch.de/english/Research/NLP/Downloads/
TYPE	Software
DATES	Version 0.94, April 2003
ABSTRACT	This tool allows the annotation of all kinds of linguistic data which consist of markables, attributes assigned to these markables and relations between them. The tool was used to annotate bridging relations ('associative anaphora') in a corpus, to develop and evaluate bridging resolution systems, etc.

TITLE	DAT annotation tool
URL	http://www.cs.rochester.edu/research/cisd/resources/damsl/
TYPE	Software
DATES	Version 1.10, 1998
ABSTRACT	The goal of the Multiparty Discourse Group of the DRI (see these entries) is to devise a common high-level framework of dialog acts. The group, based at the University of Rochester, provides the DAT (dialog acts tagger) annotation tool.

TITLE	GATE: General Architecture for Text Engineering
URL	http://gate.ac.uk/
TYPE	Software
DATES	Version 2.1, February 2003
ABSTRACT	GATE provides a TIPSTER-compliant framework to combine text processing modules in order to perform various tasks. GATE can be freely downloaded for research purposes and is supplied with an Information Extraction system.

TITLE	TRINDIKIT
URL	http://www.ling.gu.se/projekt/trindi/
TYPE	Software
DATES	2000
ABSTRACT	The TRINDI project (see separate entry) provides this toolkit for building and experimenting with dialogue move engines and information states. The toolkit specifies formats for defining information states, update rules, dialogue moves, as well as associated algorithms.

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5. Corpora

TITLE	SIGdial – ACL Special Interest Group on Dialogue
URL	http://www.iet.com/Projects/sigdial/info.html http://www.iet.com/Projects/sigdial/resources.html
TYPE	Organization
DATES	Permanent
ABSTRACT	SIGdial, among other activities, coordinates a library of discourse processing development tools, software, data, bibliographic references, publications, and links to related web pages. See especially their list of resources.

TITLE	Switchboard Corpus
URL	http://www.isip.msstate.edu/projects/switchboard/ http://www.colorado.edu/ling/faculty/jurafsky/ws97.tar.gz
TYPE	Corpus
DATES	Released August 1997; updated 2002, 2003 (minor fixes).
ABSTRACT	Corpus of two-party telephone conversations, transcribed. Part of the corpus is available for download from the Discourse Language Modeling Project at the second URL.

TITLE	HCRC Map Task Corpus and XML Annotations
URL	http://www.hcrc.ed.ac.uk/dialogue/maptask.html (presentation) http://www.hcrc.ed.ac.uk/maptask/ (data and tools)
TYPE	Corpus, tools
DATES	1992-2001
ABSTRACT	The Map Task is a cooperative task involving two participants sitting opposite one

	<p>another, each one having a map which the other cannot see. One speaker instructs the other to reproduce a route that is drawn on the instructor's map (the maps are not identical... but the participants are aware of that).</p> <p>The HCRC corpus (8 CD-ROM, raw audio files) consists of 128 digitally recorded unscripted dialogues (plus readings of landmark names). All dialogues are transcribed verbatim in standard orthography, including filled pauses, false starts, hesitations, repetitions and interruptions. The structure of the dialogue is annotated in XML. The files are available for download at the above URL.</p>
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6. Project descriptions

TITLE	Meeting Recorder Project at ICSI, Berkeley
URL	http://www.icsi.berkeley.edu/Speech/mr/index.html
TYPE	Project
DATES	ongoing
ABSTRACT	The project aims at investigating speech recognition for meetings. ICSI collects data using a meeting room equipped with a multichannel, studio-quality recording system. As of February 2001, ICSI had already 40 hours of 16 channel pilot data. Ten hours were hand-transcribed using conventions designed by Jane Edwards at ICSI. As for the goals and applications, while the basic idea is to develop recognition systems that are able to transcribe conventional meetings, more useful applications include search for particular information or production of automatic summaries. ICSI is also associated to the IM2 project.
REF	Morgan, N., Baron, D., Bhagat, S., Carvey, H., Dhillon, R., Edwards, J. A., Gelbart, D., Janin, A., Krupski, A., Peskin, B., Pfau, T., Shriberg, E., Stolcke, A., and Wooters, C. "Meetings about meetings: research at ICSI on speech in multiparty conversations." <i>ICASSP 2003 (International Conference on Acoustics, Speech, and Signal Processing)</i> , Hong Kong, China.

TITLE	ISL's Meeting Browser
URL	http://www.is.cs.cmu.edu/meeting_room/
TYPE	Project
DATES	publications: 1999-2002
ABSTRACT	This project at the Interactive Systems Laboratories (Carnegie Mellon University) develops a system for browsing a meeting. By automatically transcribing a meeting, the ISL's Meeting Browser can answer many of the questions an absent individual may ask: search the transcription for keywords and topics; emotion recognition provides clues as to the meeting's mood; summarization offers a quick overview; highlighted action items provides assignments; and video playback. The project has collected about 100 hours of meeting recordings.
REF	Waibel, A., Bett, M., Metze, F., Ries, K., Schaaf, T., Schultz, T., Soltau, H., Yu, H., and Zechner, K. "Advances in Automatic Meeting Record Creation and Access."

	<i>ICASSP 2001 (International Conference on Acoustics, Speech and Signal Processing), Salt Lake City, UT, USA.</i>
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TITLE	Meeting Tracking and Recognition (Genoa)
URL	http://www.ri.cmu.edu/projects/project_286.html
TYPE	Project
DATES	ended 2002
ABSTRACT	At Carnegie Mellon University, Robotics Institute. Seems to have preceded the Meeting Browser Project. Although the web page signals that GENOA is terminated, it includes a list of publications, some of which are related to the ISL Meeting Browser (see above).

TITLE	Automatic Meeting Transcription Project at NIST
URL	http://www.nist.gov/speech/test_beds/mr_proj/ http://www.nist.gov/speech/test_beds/mr_proj/data_collection/scenarios.html
TYPE	Project
DATES	2001
ABSTRACT	This project (volunteers' meeting in November 2001) provides a development and evaluation infrastructure for speech transcription in meetings. The infrastructure includes rich transcription and annotation conventions, a corpus of audio and video from meetings collected at NIST using a variety of microphones and video cameras, new evaluation protocols, metrics, and software, sponsoring workshops, etc. Recent developments in this project could not be found.

TITLE	SmartKom Project at DFKI
URL	http://smartkom.dfki.de/start_en.html
TYPE	Project Description
DATES	1999-present
ABSTRACT	Dialog-based Human-Technology Interaction by Coordinated Analysis and Generation of Multiple Modalities.

TITLE	M4
URL	http://www.dcs.shef.ac.uk/spandh/projects/m4/
TYPE	Project
DATES	Started March 1 st , 2002
ABSTRACT	This European IST project aims at building a demonstration system to enable structuring, browsing and querying of an archive of automatically analysed meetings (recorded in a room equipped with multimodal sensors). The program of work is

	divided in: Smart Meeting Room, Data Collection and Annotation (WP1); Multimodal Recognition (WP2); Multimodal Integration (WP3); Demonstration and Evaluation (WP4); Dissemination, Exploitation and Evaluation (WP5).
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TITLE	TRIPS
URL	http://www.cs.rochester.edu/research/cisd/projects/
TYPE	Project, software
DATES	last modified 2000
ABSTRACT	<p>Follows the TRAINS Project, University of Rochester.</p> <p>TRIPS, The Rochester Interactive Planning System, is the latest in a series of prototype collaborative planning assistants. The goal is an intelligent planning assistant that interacts with its human manager using a combination of natural language and graphical displays. The system understands the interaction as a dialogue between it and the human, thus providing a context for interpreting human utterances and actions, and a structure for deciding what to do in response.</p>

TITLE	Verbmobil
URL	http://verbmobil.dfki.de/ http://www.dfki.de/cgi-bin/verbmobil/htbin/doc-access.cgi (document server)
TYPE	Project
DATES	1996-2000
ABSTRACT	Verbmobil was a German long-term project aiming at the development of a mobile translation system for the translation of spontaneous speech in face-to-face situations.

TITLE	Smart Space Laboratory at NIST
URL	http://www.nist.gov/smartspace/
TYPE	Lab description
DATES	2001
ABSTRACT	<p>This laboratory provides support to the IT industry in technology research, standards and measurements. Our Modular Test Bed enables the research community to bring next generation technologies together in a vendor-neutral environment. It consists of a defined middleware API for real-time data transport, a connection broker server for sensor data sources, and processing data sinks.</p> <p>Smart Spaces are work environments with embedded computers, information appliances, and multi-modal sensors which offer people unprecedented levels of access to information and assistance from computers. The NIST mission is to address the measurement, standards and interoperability challenges that must be met.</p>

TITLE	Discourse Resource Initiative (DRI)
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URL	http://www.georgetown.edu/luperfoy/Discourse-Treebank/dri-home.html
TYPE	Organization
DATES	
ABSTRACT	See in particular the section on the Multiparty Discourse Group.

TITLE	Annotating Argumentation Acts in Spoken Dialog
URL	http://www.cs.rochester.edu/research/cisd/projects/
TYPE	Project
DATES	
ABSTRACT	A project at the University of Rochester.

TITLE	Discourse Language Modelling Project
URL	http://www.colorado.edu/ling/jurafsky/ws97/
TYPE	Documents and resources
DATES	1998
ABSTRACT	About the Switchboard corpus annotated with the DAMSL scheme.

TITLE	MATE : Multilevel Annotation, Tools Engineering
URL	http://mate.nis.sdu.dk/ http://www.cogsci.ed.ac.uk/~dmck/MateCode/
TYPE	European Project (Telematics Project LE4-8370).
DATES	1998-2000
ABSTRACT	See in particular Deliverables D1.1 (on pre-existent annotation schemes) and D2.2 on the MATE Dialogue Annotation Scheme (prosody, morpho-syntax, dialogue acts, coreference, communication problems) in the documents section above. The project designed also an annotation workbench, available at the second URL above.

TITLE	NITE : Natural Interactivity, Tools Engineering
URL	http://nite.nis.sdu.dk/
TYPE	Project
DATES	2001-2003
ABSTRACT	European HLT Project.

TITLE	PARADISE: A Framework for Evaluating Spoken Dialogue Agents
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URL	http://www.research.att.com/~walker/cv.html http://www.research.att.com/~walker/nle-4.pdf (NLE 2000) http://www.research.att.com/~walker/comp-sl11.ps (CSL 1998) http://www.research.att.com/~walker/acl21.ps (ACL 1997) http://acl.ldc.upenn.edu/P/P97/P97-1035.pdf (ACL 1997)
TYPE	Evaluation Scheme
DATES	ca. 1998
ABSTRACT	The scheme is described in several papers by Marilyn A. Walker (Univ. of Edinburgh), cf. URLs above.

TITLE	TRINDI
URL	http://www.ling.gu.se/projekt/trindi/
TYPE	Project description
DATES	1998-2000
ABSTRACT	TRINDI (Task Oriented Instructional Dialogues) is a European project (LE4-8314) focusing on dialogues between humans and machines, which enable humans to make choices in the performance of a certain task, such as route planning. Scenarios are analyzed using a grid of user interaction levels (from menu selection to spoken questions), and machine interaction levels (from pre-stored text to generated speech). Participants: Göteborg University (P. Bohlin, R. Cooper, E. Engdahl, S. Larsson, D. Traum), Edinburgh University (E. Klein, C. Matheson, M. Moens, M. Poesio), SRI Cambridge (I. Lewin, D. Milward, S. Pulman), Saarbrücken University (J. Bos, M. Pinkal), Xerox XRCE (L. Karttunen, A. Zaenen).

TITLE	WITAS
URL	http://www-csli.stanford.edu/semlab/witas/
TYPE	Project
DATES	2000-2002 and on
ABSTRACT	The WITAS Project at CSLI. Its main aim of the Conversational Interfaces project at CSLI is to build a general purpose dialogue system which supports multi-modal activity-oriented dialogues with devices. The goal is to pilot a helicopter (unmanned) using human-computer dialogue. The system uses a common software base consisting of the Open Agent Architecture, Nuance speech recogniser, Gemini (SRI's Natural Language parser and generator), and speech synthesis using Festival. The system handles "unscriptable" dialogues where there is no finite state transition network describing a conversation, and no clear end state for a conversation (different from the "form-filling" paradigm, such as many travel-planning systems). Research aims to address specific theoretical questions such as: what is the right level of abstraction at which to describe dialogue moves and context? What is an effective multi-modal communication act? How can they be generated? What notion of dialogue context or "information state" is appropriate in multi-modal contexts?

TITLE	DiaLeague
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URL	http://dialeague.csl.sony.co.jp/
TYPE	Project description
DATES	ongoing (?)
ABSTRACT	DiaLeague Project at Sony CSL. A web-based interface for people to talk with artificial dialogue systems. The dialogues are multimodal in that they involve spatial operations, though currently the utterances are textual. The web server is quite rudimentary.

TITLE	Persona
URL	http://research.microsoft.com/ui/persona/home.htm
TYPE	Project (Microsoft Research, USA)
DATES	1997 (?)
ABSTRACT	The Persona project develops technologies to produce conversational assistants that interact with a user in a natural spoken dialogue. The work is built upon the Whisper speaker-independent continuous speech recognition system and a broad coverage English understanding system, both also developed at Microsoft Research. In an initial prototype, an expressive 3-dimensional parrot named Peedy responds to user requests for music.