






Publications and Refereed or Invited Presentations


Udo Gebelein, Stefan Rapp (2020) "A Hearing Aid to Visualize the Direction of Sound", ESSV 2020, 31st Conference on Electronic Speech Signal Processing, March 4–6, Magdeburg, Germany. 


Bram van der Vlist, Gerrit Niezen, Stefan Rapp, Jun Hu, Loe Feijs (2012) "Controlling Smart Home Environments with Semantic Connections: a Tangible and an AR Approach", DeSForM 2012, 7th International Workshop on the Design & Semantics of Form & Movement, April 18–20, Wellington, New Zealand. 


Stefan Rapp, Bram van der Vlist, Gerrit Niezen (2011) "The SOFIA Smart Home Pilot", video presentation, Artemis Technology Conference, September 12–13, Bologna, Italy. 


Stefan Rapp (2011) "A PrologKP with SIB Caching and Client Side Native Prolog Querying", slide presentation, Artemis Technology Conference, September 12–13, Bologna, Italy. 


Stefan Rapp (2010) "Projektion im Museum: Mit Projektion, Bewegung und Interaktion Exponate erlebbar machen" (in German), slide presentation, MuTec 2010, November 18–20, Leipzig, Germany. 


Giada Landi, Giorgio Laura, Vincenzo Memeo, Paolo Pucci, and Stefan Rapp (2010) "A Unified Monitoring for Smart City Environment based on SOFIA's Interoperability Open Platform", In: Pervasive 2010 Adjunct Proceedings (poster sessions), May 17–20, Helsinki, Finland. 

Stefan Rapp (2010) "Spotlight Navigation and LumEnActive: Ubiquitous Projection User Interfaces", In: Pervasive 2010 Adjunct Proceedings (demo sessions), May 17–20, Helsinki, Finland. 


Stefan Rapp, Irene Weber (2010) "LumEnActive and Pervasive Digital Signage Projection", In: Proc. Pervasive Advertising and Shopping 2, May 17, Helsinki, Finland. 


Stefan Rapp (2010) "Spotlight Navigation: a pioneering user interface for mobile projection", In: Proc. Ubiprojection, May 17, Helsinki, Finland. 

Stefan Rapp (2009) "Application of LumEnActive for signage and route guidance", slide presentation und demonstration, sign09, December 3–11, Vienna, Austria. 



Stefan Rapp (2009) "LumEnActive foveal displays", slide presentation and demonstration, Heidelberger Innovationsforum 2009, October 20, Heidelberg, Germany. 



Stefan Rapp, Irene Weber (2009) "LumEnActive: Bewegte Projektion mit Anwendungsmöglichkeiten in Fertigung und Entwicklung" (in German), In: Tagungsband zur 6. Fachtagung zur Virtual Reality "Digitales Engineering zum Planen, Testen

und Betreiben technischer Systeme“, Fraunhofer IFF, June 16–18, Magdeburg, Germany. 





Stefan Rapp (2008) “LumEnActive: Projektion–Bewegung–Interaktion” (in German), slide presentation and demonstration, “Erlebniswelt Museum“, Landesmuseum Baden-Württemberg, April 14, Stuttgart, Germany. 
(Invited talk)


Stefan Rapp, Irene Weber (2007) “LumEnActive and Spotlight Navigation“, demonstration, “Where Creativity meets Technology“, Landesvertretung Baden-Württemberg in Brüssel und MFG, March 20, Brussels, Belgium.
(Invited demonstration)


Stefan Rapp (2006) “EnChoi: Intelligente Auswahl in Musik- und anderen Datenbanken” (in German), slide presentation and demonstration, Heidelberger Innovationsforum 2006, November 28–29, Heidelberg, Germany.  


Stefan Rapp (2006) “Spotlight Navigation: Eine neuartige Bedien- und Displaylösung für mobile Geräte” (in German), slide presentation and demonstration, Heidelberger Innovationsforum 2006, November 28–29, Heidelberg, Germany.  



Silke Goronzy, Stefan Rapp, Martin Emele (2006) “The Dynamic Lexicon“, In: “SmartKom: Foundations of Multimodal Dialogue Systems“, pp. 123–138, Springer, Berlin, Germany.

Stefan Rapp (2005) “Character Pump: Texteingabe an mobilen Geräten ohne Tastatur” (in German), slide presentation and demonstration, Heidelberger Innovationsforum 2005, November 29–30, Heidelberg, Germany.    


Stefan Rapp, Irene Weber (2005) “LumEnActive: A novel presentation tool for interactive installations“, In: 6th International Symposium on Virtual Reality, Archaeology and Cultural Heritage (VAST 2005), November 8–11, Pisa, Italy. 

Georg Michelitsch, Martin Osen, Jason Williams, Beatriz Jimenez, Stefan Rapp (2004) “Haptic Chameleon“, Proceedings EuroHaptics 2004, June 5–7, Munich, Germany. 


Georg Michelitsch, Jason Williams, Martin Osen, Beatriz Jimenez, Stefan Rapp (2004) “Haptic chameleon: a new concept of shape-changing user interface controls with force feedback“, CHI Extended Abstracts 2004, pp. 1305–1308, April 24–29, Vienna, Austria. 



Stefan Rapp, Georg Michelitsch, Martin Osen, Jason Williams, Martin Barbisch, Roman Bohan, Zica Valsan, Martin Emele (2004) “Spotlight Navigation: Interaction with a handheld projection device“, In: Advances in Pervasive Computing, A Collection of Contributions Presented at PERVASIVE 2004, pp. 397–400, April 18–23, Linz/Vienna, Austria.  


Christian Elting, Stefan Rapp, Gregor Möhler, Michael Strube (2003) “Architecture and Implementation of Multimodal Plug and Play“, In: Proceedings of the 5th Inter-


national Conference on Multimodal Interfaces (ICMI-PUI '03), pp. 93–100, November 5–7, Vancouver, B.C., Kanada. 


Thomas Kirste, Stefan Rapp (2003) "Architectures for Multimodal Interactive Assistant Systems", In: Jacko, Julie A. (Ed.) et al.: HCI International 2003 Proceedings of the 10th International Conference on Human-Computer Interaction, Volume 4, pp. 419-423, June 22–27, Crete, Greece.


Stefan Rapp (2003) "Different Views on Multimodal Assistance", Interdisciplinary College 2003, March 8, Günne at Lake Möhne, Germany. 
(Invited evening talk)


Stefan Rapp (2002) "On the Dynamic Configuration of Multimodal Assistant Systems", Draft, published as part of the "Schlußbericht zum MTI-Leitprojekt-Vorhaben EMBASSI 1999 - 2003 (Sony)" (in German), TIB/UB Hannover, F 04 B 1459.  


Sunna Torge, Stefan Rapp, Ralf Kompe (2002) "Serving Complex User Wishes with an Enhanced Spoken Dialogue System", In: Proceedings of ICSLP 2002, Volume 3, pp. 2049–2052, September 16–20, Denver, Colorado, USA. 


Jason Williams, Georg Michelitsch, Gregor Moehler, Stefan Rapp (2002) "A Methodology for Evaluating Multimodality in a Home Entertainment System", In: Proceedings of the 4th IEEE International Conference on Multimodal Interfaces 2002, October 14–16, Pittsburgh, PA, USA. 

Christian Elting, Michael Strube, Gregor Moehler, Stefan Rapp, Jason Williams (2002) "The Use of Multimodality within the EMBASSI system", slide presentation, Mensch & Computer 2002, Workshop: Usability Engineering Multimodaler Interaktionsformen, September 4, Hamburg, Germany. 


Christoph Müller, Stefan Rapp, Michael Strube (2002) "Applying Co-Training to Reference Resolution", In: Proceedings of the 40th Annual Meeting of the Association for Computational Linguistics (ACL '02), pp. 352–359, July 7–12, Philadelphia, PA, USA. 

Michael Strube, Stefan Rapp, Christoph Müller (2002) "The Influence of Minimum Edit Distance on Reference Resolution", In: Proceedings of the 2002 Conference on Empirical Methods in Natural Language Processing (EMNLP '02), pp. 312–319, July 6–7, Philadelphia, PA, USA. 


Sunna Torge, Stefan Rapp, Ralf Kompe (2002) "The planning component of an intelligent human-machine interface in changing environments", Multi-modal Dialogue in Mobile Environments (IDS-02), paper 40, 12 p., June 17–19, Kloster Irsee, Germany. 


Stefan Rapp, Michael Strube (2002) "An Iterative Data Collection Approach for Multimodal Dialogue Systems", In: Proceedings of the 3rd International Conference on Language Resources and Evaluation, pp. 661–665, May 29–31, Las Palmas, Canary Islands, Spain. 


Antje Schweitzer, Stefan Rapp, Lex Olorenshaw, Jürgen Schimanowski (2001) "Automatic Pronunciation Generation for Speech Recognition", Sony Research Forum (SRF2001) Technical Digest, December 14–15, Sony Corporation Corporate Technology Dept., Tokyo, Japan.

Thomas Kirste, Stefan Rapp (2001) "Architecture for Multimodal Interactive Assistant Systems", International Status Conference Lead Projects Human-Computer-Interaction, pp. 111–115, October 26–27, Projektträger Informationstechnik, DLR Berlin, Saarbrücken, Germany. 


(Invited talk)


Silke Goronzy, Ralf Kompe, Stefan Rapp (2001) "Generating Non-Native Pronunciation Variants for Lexicon Adaptation", ISCA Tutorial and Research Workshop (ITRW) on Adaptation Methods for Speech Recognition (Adaptation-2001), August 29–30, Sophia Antipolis, France. 


Anton Batliner, Bernd Möbius, Antje Schweitzer, Silke Goronzy, Stefan Rapp, Peter Regel-Brietzmann (2001) "Guidelines for 'Text-to-Phone' (TTP) Conversion, i.e., the SAMPA-Inventory plus some other Conventions for the SmartKom Lexikon", SmartKom Technisches Dokument 16, May 2001, Lehrstuhl für Mustererkennung, Universität Erlangen, Germany. / 

Georg Michelitsch, Claudia Settele, Patrick Hilt, Sunna Torge, Stefan Rapp (2000) "EMBASSI: Overview of the Architecture for a Multimodal Interface for Future Home Entertainment Systems", Proceedings of the 10th Sony Research Forum (SRF2000), Sony Corporation Corporate Technology Dept., Tokyo, Japan. 

Georg Michelitsch, Claudia Settele, Patrick Hilt, Sunna Torge, Stefan Rapp (2000) "Overview of the EMBASSI Project and Architecture", Sony Research Forum (SRF2000) Technical Digest, December 14–15, Sony Corporation Corporate Technology Dept., Tokyo, Japan.
(Outstanding paper award)


Stefan Rapp, Michael Strube, Georg Michelitsch (2000) "PMI und PMO: Multimodale Ein- und Ausgabe in EMBASSI" (in German), slide presentation, Workshop "Multimodale Interaktion und Modellierung", September 27, Heidelberg, Germany. 


Stefan Rapp, Sunna Torge, Silke Goronzy, Ralf Kompe (2000) "Dynamic speech interfaces", ECAI Satellite Workshop AI in Mobile Systems (AIMS2000), August 22, Berlin, Germany. 


Stefan Rapp, Daniela Raddino (1999) "Trained Automatic Grapheme to Phoneme Conversion", Proceedings of the 9th Sony Research Forum (SRF'99), Sony Corporation Corporate Technology Dept., Tokyo, Japan. 

Stefan Rapp, Daniela Raddino (1999) "Trained Automatic Grapheme to Phoneme Conversion", Sony Research Forum (SRF'99) Technical Digest, October 26, Sony Cor-

poration Corporate Technology Dept., Tokyo, Japan.
(Best paper award, best presentation award)


Stefan Rapp (1999) "Multimodale Mensch-Technik-Interaktion" (in German), Elektronische Sprachsignalverarbeitung, Zehnte Konferenz (Tagungsband), Hrsg. Dieter Mehnert, Studientexte zur Sprachkommunikation Band 16, September 20–22, web Universitätsverlag Dresden, Görlitz, Germany. 
(Invited keynote speech)

Stefan Rapp, Grzegorz Dogil (1998) "Same News is Good News: Automatically Collecting Reoccurring Radio News Stories", Proceedings International Conference on Spoken Language Processing (ICSLP 98), November 30 – December 4, Sydney, Australia. 


Stefan Rapp (1998) "Automatic Labelling of German Prosody", Proceedings Fifth International Conference on Spoken Language Processing (ICSLP 98), November 30 – December 4, Sydney, Australia. 


Stefan Rapp, Silke Goronzy, Ralf Kompe, Peter Buchner (1998) "A Speech Unit for i.LINK", Sony Research Forum (SRF'98) Technical Digest, October, Sony Corporation Corporate Technology Dept., Tokyo, Japan.


Stefan Rapp (1998) "The Speech Interface Definition Language SIDL", Sony Research Forum (SRF'98) Technical Digest, Oktober, Sony Corporation Corporate Technology Dept., Tokyo, Japan.

Stefan Rapp (1998) "Automatisierte Erstellung von Korpora für die Prosodieforschung" (in German), Ph.D. thesis, Institut für Maschinelle Sprachverarbeitung, Universität Stuttgart, Germany. 


Ralf Kompe, Silke Goronzy, Stefan Rapp, Peter Buchner (1997) "The German Isolated Word Recognizer", Sony Research Forum (SRF'97) Technical Digest, October 28, Sony Corporation Corporate Technology Dept., Tokyo, Japan.


Grzegorz Dogil, Jonas Kuhn, Jörg Mayer, Gregor Möhler, Stefan Rapp (1997) "Prosody and discourse structure: Issues and experiments", Proceedings of the ESCA Workshop on Intonation: Theory, Models and Applications, September 18–20, Athens, Greece. 


Stefan Rapp (1996) "Goethe for Prosody", Proceedings Fourth International Conference on Spoken Language Processing (ICSLP 96), October 3–6, Philadelphia, PA, USA. 

Stefan Rapp (1995) "Maschinelles Lernen von Aspekten des deutschen Wortakzents" (in German), Arbeitspapiere des Instituts für Maschinelle Sprachverarbeitung (AIMS) VOL. 2, NO. 2, 4/1995, pp. 149–240, Universität Stuttgart, Germany. 

Stefan Rapp (1995) "Automatic phonemic transcription and linguistic annotation from known text with Hidden Markov Models: An Aligner for German", Proceedings

of ELSNET goes east and IMACS Workshop “Integration of Language and Speech in Academia and Industry”, November 9–11, Moscow, Russia. 

Stefan Rapp (1994) “Maschinelles Lernen von Aspekten des deutschen Wortakzents” (in German), Diploma Thesis No. 1176, Institut für Informatik, Universität Stuttgart, Germany. 

Stefan Rapp, Michael Jessen, Grzegorz Dogil (1994) “Using Rough Sets Theory to Predict German Word Stress”, In: KI-94: Advances in Artificial Intelligence, Eds.: Bernd Nebel and Leonie Dreschler-Fischer, Springer, Lecture Notes in Artificial Intelligence 861, September 18–23, Saarbrücken, Germany. 

Honors and Awards

ARTEMIS Exhibition Award awarded to “SOFIA: Smart Objects for Intelligent Applications” at ARTEMIS & ITEA Co-summit 2010, October 26–27, 2010, Ghent, Belgium.

CyberOne short list for “LumEnActive: Anzeige von projizierten Inhalten” at 10th CyberOne, bwcon, May 5, 2008, Esslingen.

Job title “Principal Engineer” awarded, Sony International(Europe) GmbH, July, 2000.

Outstanding Paper Award awarded to “Overview of the EMBASSI Project and Architecture” at Sony Research Forum '00, December 14–15, 2000, Tokyo, Japan.

Best Session Presentation Award awarded to “Trained Automatic Grapheme to Phoneme Conversion” at Sony Research Forum '99, October 26, 1999, Tokyo, Japan.

Paper Award awarded to “Trained Automatic Grapheme to Phoneme Conversion” at Sony Research Forum '99, October 26, 1999, Tokyo, Japan.

Academic title Doktor der Philosophie (Dr. phil.) received from University of Stuttgart for “Automatisierte Erstellung von Korpora für die Prosodieforschung”, August 17, 1998.

Academic title Diplom-Informatiker received from University of Stuttgart “with excellence”, January 31, 1995.

Patent Applications

EP000002950200A1	Vorrichtung und Verfahren zur Audiowiedergabe für ein Kombiinstrument eines Kraftfahrzeuges
DE102006052570A1	Display device for showing extensive information
DE202005017431.9	Anzeigevorrichtung
DE102007004660A1	Haptic operating unit for use in modern motor vehicle
EP000001533685A1	Handheld device for navigating and displaying data
WO002005041017A3	Handheld device for navigating and displaying data
GB000002423685B	Handheld device for navigating and displaying data
DE112004002016T5	In der Hand gehaltenes Gerät zur Navigation durch Daten und zur Datenanzeige
EP000001531388A3	Handheld device for data input
WO002005041018A1	A handheld device for displaying information
GB000002423137B	A handheld device for displaying information
DE112004002015T5	Ein in der Hand gehaltenes Gerät zum Anzeigen von Informationen
DE102005062707A1	Verfahren und Vorrichtung zur Zeicheneingabe bei Geräten mit einem Display
EP000001681622B1	Handheld device for data input by a user
DE602004009333T2	Tragbare Vorrichtung zur Dateneingabe
DE102007006637A1	User interface unit computer-controlled systems
WO002005040954A1	Haptic input device for generating control information
GB000002423136B	Haptic input device for generating control information
DE112004001937T5	Haptisches Eingabegerät zur Erzeugung von Steuerungsinformation
EP000001464980A1	Method for determining a spatial position
EP000001426919A1	Method for operating a display device
JP002004185007A	Method of controlling display device
US020040160386A1	Method for operating a display device
EP000001391808A1	Method for controlling a man-machine interface unit
EP000001478154A1	Method for serving user requests
JP002004342113A	Method for serving user request

US020040247281A1	Method for serving user requests
EP000001315147A1	Method for processing user requests with respect to a network of electronic devices
JP002001005489A	Control method of network
US020030101057A1	Method for serving user requests with respect to a network of devices
EP000001213706B1	Method for online adaptation of pronunciation dictionaries
DE000060029456T2	Verfahren zur Online-Anpassung von Aussprachewörterbüchern
JP002003186493A	Method for online adaptation of pronunciation dictionary
US020020095282A1	Method for online adaptation of pronunciation dictionaries
EP000001045374B1	Merging of speech interfaces from concurrent use of devices and applications
US000006615177B1	Merging of speech interfaces from concurrent use of devices and applications
JP002001005489A	Control Method of Network
KR102001020734A	Method of controlling network
CN000001145927C	Speech interface for simultaneous use of facility and application
EP000000911808B1	Speech interface in a home network environment
DE000069712485T2	Sprachschnittstelle für ein Hausnetzwerk
JP000011311996A	Speech device, and remotely controllable network equipment
US000006535854B2	Speech recognition control of remotely controllable devices in a home network environment