Goal management for a multisession dialogue

Nguyen H.

Faculty of Information Technology, College of Technology, Vietnam National University, Hanoi, 144, Xuan Thuy Street, Can Giay, Ha Noi, Viet Nam

Abstract: The goal management is a difficult task for a spoken dialogue system, especially for the multisession dialogue. Instead of engaging a single user and the dialogue system in an ordinary dialogue, a multisession dialogue eventually invokes multiple successive users related by resource conflicts. Thus, the dialogue system should take an intermediary role to communicate with these users by creating several successive sessions in order to reach a better compromised solution among them. In this paper, we present an approach to managing the goal of a multisession dialogue by using an AND-OR tree, in order to bring the performance to our spoken dialogue system. In common with the notion of dialogue agenda, a multisession dialogue is totally managed by using a tree of conflicting goals. The results of experiments performed with the dialogue system Melina show the efficiency of our approach in order to solve the resource conflicts along a series of sessions and with different related users. © 2007 IEEE.

Author Keywords: AND-OR tree; Conflicting goal; Dialogue strategy; Multisession dialogue; Tree of conflicting goals

Index Keywords: Information technology; Operating rooms; AND-OR tree; Conflicting goal; Dialogue strategy; Multisession dialogue; Tree of conflicting goals; Speech processing

Year: 2007

Source title: Proceedings - 2007 International Symposium on Information Technology Convergence, ISITC 2007

Art. No.: 4410654

Page : 301-305

Link: Scorpus Link

Correspondence Address: Nguyen, H.; Faculty of Information Technology, College of Technology, Vietnam National University, Hanoi, 144, Xuan Thuy Street, Can Giay, Ha Noi, Viet Nam; email: Hoa.Nguyen@vnu.edu.vn

Sponsors: Institute for Information Technology Advancement (IITA);Jeollabukdo;BK21;Korea Science and Engineering Foundation (KOSEF);IEEE Seoul Section

Conference name: 2007 International Symposium on Information Technology Convergence, ISITC 2007 Conference date: 23 November 2007 through 24 November 2007

Conference location: Jeonju

Conference code: 72856

ISBN: 0769530451; 9780769530451

DOI: 10.1109/ISITC.2007.51

Language of Original Document: English

Abbreviated Source Title: Proceedings - 2007 International Symposium on Information Technology

Convergence, ISITC 2007

Document Type: Conference Paper

Source: Scopus

Authors with affiliations:

• Nguyen, H., Faculty of Information Technology, College of Technology, Vietnam National University, Hanoi, 144, Xuan Thuy Street, Can Giay, Ha Noi, Viet Nam

References:

- Austin, J.L., (1962) How to Do Things with Words, , Harvard University Press
- Baggia, P., Gauvain, J.L., Kellner, A., Perennou, G., Popovici, C., Sturm, J., Wessel, F., Language Modelling and Spoken Dialogue Systems the ARISE experience (1999) Conference on Speech Communication und Technology, September
- Bourque, R., Thuderoz, C., Sociologie de la né gociation (2002) La Découverte & Syros, , Edition, Paris, France
- Caelen, J., Strategies of Dialogue (2003) Speech Technology ami Human-Computer Dialogue Conference, Editura Academiei Romane, pp. 27-42., Bucarest, ISBN 973-27-0963-4. p
- Caelen, J., Nguyen, H., Gestion de buts de dialogue (2004) Natural Language Processing TALN conference, , April
- Nguyen, H., Caelen, J., Generic manager for spoken dialogue systems (2003) DiaBruck: 7th Workshop on the Semantics and Pragmatics of Dialogue, , Saarbrucken, Germany
- Nguyen H, 2005, Dialogue Homme-Machine : Modélisation de multisession, PhD thesis at the University of Joseph Fourier, Grenoble, 01/2005Searle, J., (1969) Speech Acts: An Essay in the Philosophy of Language, , Cambridge University Press
- Traum, D., Issues in multi-party dialogues (2004) LNCS, , Advances in Agent Communication F. Dignum, ed, Springer-Verlag
- Vanderveken, D., (1990) Meaning and Speech Acts, pp. 1-2., and, Cambridge University Press
- Xu, W., Rudnicky, A., Task-based dialog management using an agenda (2000) Workshop on Conversational Systems