



Orchestration for Group Videoconferencing

JOANNEUM RESEARCH
Forschungsgesellschaft mbH

DIGITAL
Institute for Information and
Communication Technologies

Steyrergasse 17
8010 Graz, Austria

Tel. +43 316 876-1209
Fax +43 316 876-1191

Wolfgang Weiss
wolfgang.weiss@joanneum.at

Rene Kaiser
rene.kaiser@joanneum.at

digital@joanneum.at
www.joanneum.at/digital

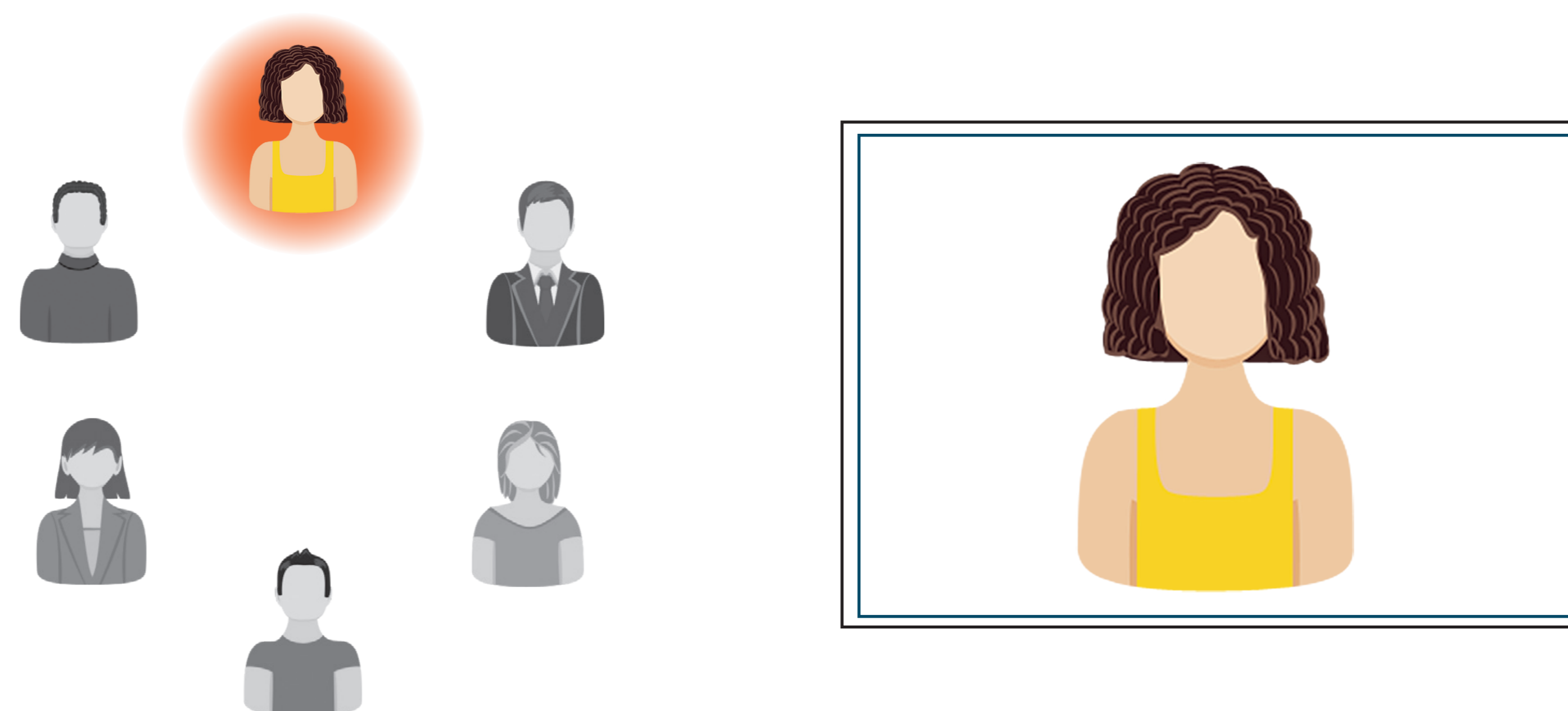
Goldsmiths
University of London
Department of Computing
London, UK

Manolis Falelakis
m.falelakis@gold.ac.uk

Current videoconferencing systems show a lack of support in adapting visual remote camera presentation to the users' needs. Some manage to put focus on the current speaker. In this demonstration we show an automatic decision making component in the realm of social video communication that aims to go beyond that. Our ap-

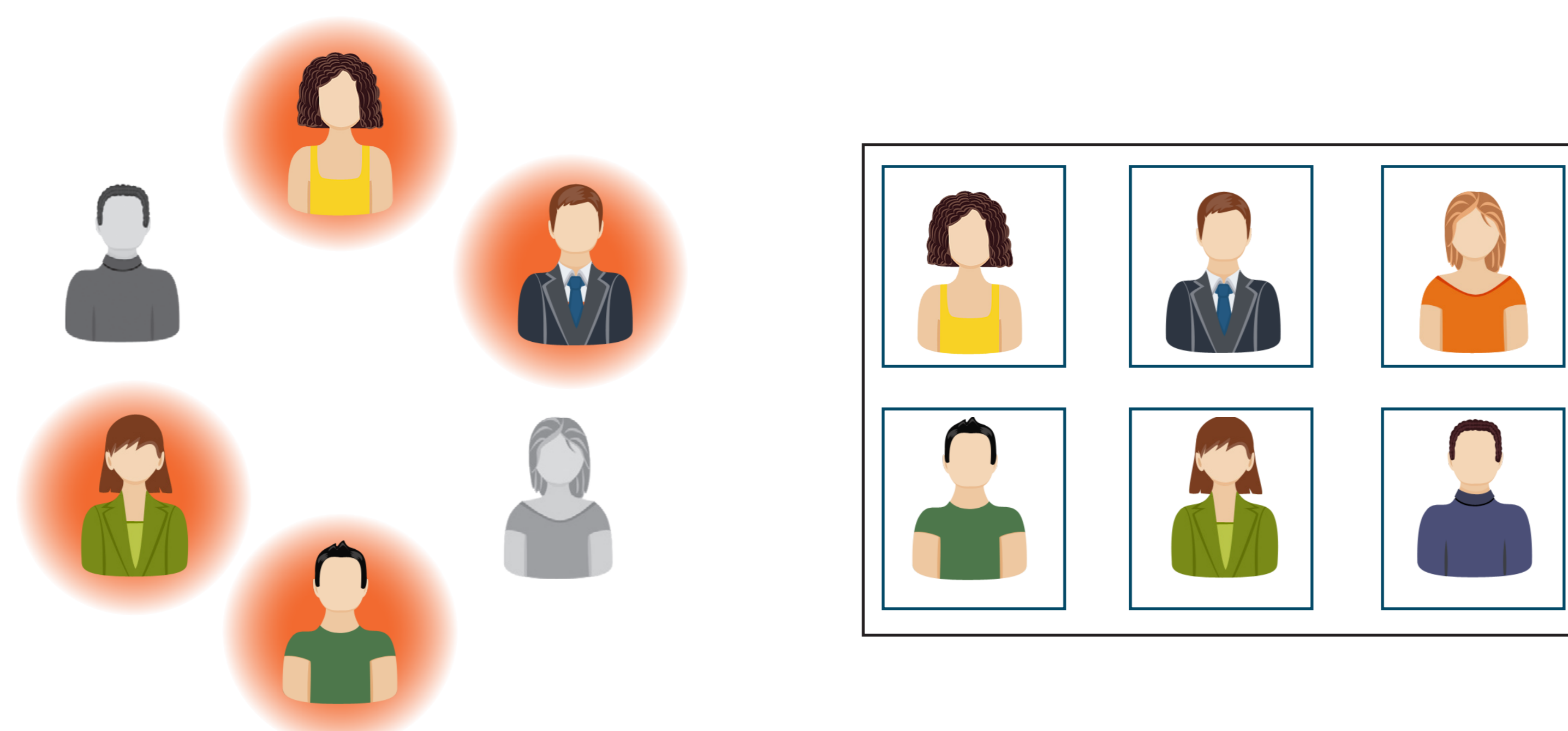
proach takes into account several aspects such as the current conversational situation, conversational metrics of the past and device capabilities to make decisions on the visual representation of available video streams. This allows to optimally support users in communication within various communication contexts.

Monologue



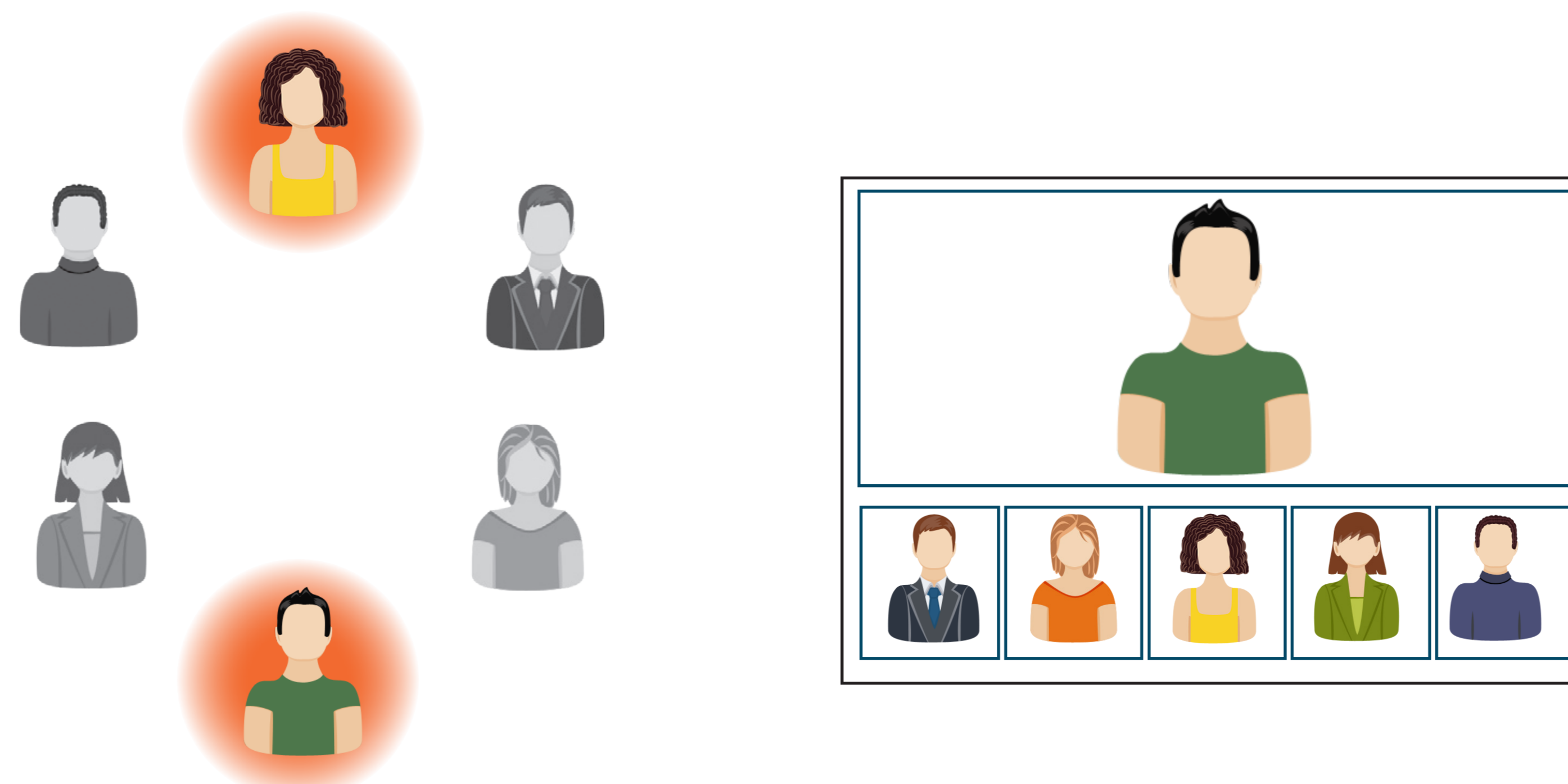
A single full screen layout which has only one video stream will be chosen when there is a monologue detected by a participant. Another reason for a single full screen layout would be if the screen size is very small.

Heated Discussion



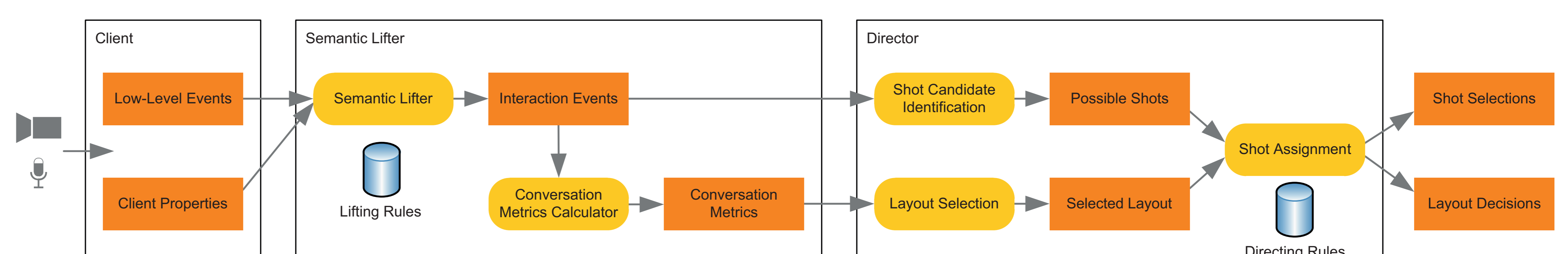
If the conversation gets more heated (animated), meaning there is a high number of turn shifts between the participants within the analysis time window, it would be beneficial for the users to see all involved participants on the screen.

Normal-paced Conversation



A layout with focus on one person and with smaller tiles for all other participants. This is suitable for most situations when the screen size is big enough and the number of participants does not exceed more than 10 people and the conversation is in a low or normal pace.

Architecture



The research leading to these results has received funding from the European Community's Seventh Framework Programme (FP7/2007-2013) under grant agreement no. ICT-2011-287760.