Supplementary Material

Ghost-in-the-Machine Reveals Human Social Signals for Human-Robot Interaction

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# Supplementary Data

The participants in the experiment observed data of pre-recorded customers (Foster et al., 2012). The examples below are taken from the log of the communication between the components of the robot and were used as input for the dedicated GiM software. The GiM software displayed this input on the user-interface as described in the main text. The log files below consist of several lines. Each line corresponds to one update in the GiM experiment. The order of presentation corresponded to the proper order according to the time stamp of the lines. The GiM software did not manipulate the data but only organised the presentation and recording of the responses.

The log files were filtered such that only two types of communication were included in the examples below and the experiment. First, the output of the social state estimator (Foster, Gaschler, & Giuliani, 2013) is listed as described in the main text. It comprises information about each agent in the scene labelled as A1 (agent 1) and A2 (agent 2). These correspond to Customer 1 and 2 in the GiM experiment. The agents are described by a number of variables, including their body orientation in degrees of angle, whether they seek attention (“!” means Boolean is false, “?” means value is unknown, no marking means Boolean is true), whether they are visible, left or right of centre and so on. Each indicator of the GiM interface corresponds to the respective variable in the output. These values are not associated to a confidence level. Secondly, the examples list the recognised speech from the Kinect speech recognition component. These lines include the utterance that has been recognized with its confidence level in brackets and the direction from where this utterance was detected in degrees of angle with its confidence level in brackets. The utterances were mapped to the respective customers based on whether they were to the left or to the right of the system (positive and negative value of the angle). The confidence level of the recognized speech was displayed in the experiment but the confidence level associated with the angle was not used.

## Example 1

-- 4/25/12 16:04:54:754 state: 1: Relations: [inTrans[]=nil, bodyOri[A1]=-33.75940295938743, !seeksAttention[A1], visible[A1], location[A1]=right, faceDir[A1]=-100000.0, !bodyLook[A1], !closeToBar[A1], !faceLook[A1], !faceSeen[A1], facePos[A1]=[-20.427838250885088, -161.25616311253162, -686.3799313377292], lastEvent[]=vision]

-- 4/25/12 16:04:57:900 state: 1: Relations: [inTrans[]=nil, bodyOri[A1]=2.006494487473111, seeksAttention[A1], visible[A1], location[A1]=right, faceDir[A1]=-100000.0, bodyLook[A1], closeToBar[A1], !faceLook[A1], !faceSeen[A1], facePos[A1]=[61.9424528235229, -389.2501873637751, -69.58958005168438], lastEvent[]=vision]

-- 4/25/12 16:05:00:113 state: 1: Relations: [inTrans[]=A1, bodyOri[A1]=-100000.0, seeksAttention[A1], visible[A1], location[A1]=left, faceDir[A1]=-100000.0, !bodyLook[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], closeToBar[A1], !faceLook[A1], !faceSeen[A1], facePos[A1]=[1693.3235178862287, 271.37443016704617, 1727.2539045653762], lastEvent[]=outputDone]

-- 4/25/12 16:05:02:117 state: 1: Relations: [inTrans[]=A1, bodyOri[A1]=-42.35912104634241, seeksAttention[A1], visible[A1], location[A1]=right, faceDir[A1]=-100000.0, !bodyLook[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], closeToBar[A1], !faceLook[A1], faceSeen[A1], facePos[A1]=[490.8987037719746, -209.7419093262069, 359.1327734583233], lastEvent[]=timeout]

-- 4/25/12 16:05:04:579 state: 1: Relations: [inTrans[]=A1, bodyOri[A1]=-100000.0, seeksAttention[A1], visible[A1], location[A1]=right, faceDir[A1]=-100000.0, !bodyLook[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], closeToBar[A1], !faceLook[A1], !faceSeen[A1], facePos[A1]=[899.824484542649, -11.350269169173004, 771.9359517668474], lastEvent[]=outputDone]

-- 4/25/12 16:05:04:583 kinect-speech: 1: recognized: Dankeschön (0,25317907333374) 11,6568409022208 (0,39773017628865)

-- 4/25/12 16:05:06:073 kinect-speech: 1: recognized: Okay (0,358727335929871) -6,01792469734929 (1)

-- 4/25/12 16:05:07:524 kinect-speech: 1: recognized: eine Cola (0,543479263782501) -7,57497969329579 (0,501914885038643)

-- 4/25/12 16:05:07:594 state: 1: Relations: [inTrans[]=A1, bodyOri[A1]=-100000.0, !badASR[A1], visible[A1], faceDir[A1]=-100000.0, location[A1]=right, closeToBar[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], transHistory[agentOrdered, A1], facePos[A1]=[467.67589704367936, -173.12446625778364, 319.3465316423933], seeksAttention[A1], !bodyLook[A1], request[A1]=coke, !faceLook[A1], faceSeen[A1], lastEvent[]=userSpeech]

-- 4/25/12 16:05:10:069 kinect-speech: 1: recognized: Dankeschön (0,312276810407639) -8,06703848181441 (0,678347759282884)

-- 4/25/12 16:05:10:127 state: 1: Relations: [inTrans[]=A1, bodyOri[A1]=-100000.0, !badASR[A1], visible[A1], faceDir[A1]=-100000.0, location[A1]=right, closeToBar[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], transHistory[agentOrdered, A1], transHistory[robotServed, A1], facePos[A1]=[559.9051214025718, -138.06814434398345, 437.7350530253692], seeksAttention[A1], !bodyLook[A1], request[A1]=coke, !faceLook[A1], !faceSeen[A1], lastEvent[]=outputDone]

-- 4/25/12 16:05:12:078 kinect-speech: 1: recognized: eine Cola (0,235002711415291) -7,03940221940577 (1)

-- 4/25/12 16:05:15:130 state: 1: Relations: [inTrans[]=A1, bodyOri[A1]=-100000.0, !badASR[A1], visible[A1], faceDir[A1]=-100000.0, location[A1]=right, closeToBar[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], transHistory[agentOrdered, A1], transHistory[robotServed, A1], facePos[A1]=[761.0573410776095, -78.72235699386559, 635.50377582438], seeksAttention[A1], !bodyLook[A1], request[A1]=coke, !faceLook[A1], !faceSeen[A1], lastEvent[]=timeout]

## Example 2

-- 4/26/12 11:10:22:749 kinect-speech: 1: recognized: Tschüss (0,00344359874725342) 2,45971479149247 (0,386005730182847)

-- 4/26/12 11:10:24:575 kinect-speech: 1: recognized: Nein (0,0838528275489807) 1,21763031304319 (0,328244627753669)

-- 4/26/12 11:10:30:266 state: 1: Relations: [inTrans[]=nil, bodyOri[A1]=-27.175903354394443, ?seeksAttention[A1], visible[A1], location[A1]=left, faceDir[A1]=-100000.0, !bodyLook[A1], closeToBar[A1], !faceLook[A1], !faceSeen[A1], facePos[A1]=[51.8761859189126, 633.5082024895041, -171.00327806307473], lastEvent[]=vision]

-- 4/26/12 11:10:30:535 state: 1: Relations: [inTrans[]=nil, bodyOri[A1]=-1.2159509997777624, ?seeksAttention[A1], visible[A1], location[A1]=left, faceDir[A1]=-100000.0, bodyLook[A1], closeToBar[A1], !faceLook[A1], !faceSeen[A1], facePos[A1]=[65.44681122908582, 584.6834704380065, -70.50871698006063], lastEvent[]=vision]

-- 4/26/12 11:10:32:476 state: 1: Relations: [inTrans[]=A1, bodyOri[A1]=62.20374835162733, ?seeksAttention[A1], visible[A1], location[A1]=left, faceDir[A1]=-100000.0, !bodyLook[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], closeToBar[A1], !faceLook[A1], !faceSeen[A1], facePos[A1]=[14.705494010108168, 608.5962647852457, -81.84556266045661], lastEvent[]=outputDone]

-- 4/26/12 11:10:32:518 state: 1: Relations: [inTrans[]=A1, bodyOri[A1]=54.98738522272601, ?seeksAttention[A1], visible[A1], location[A1]=left, faceDir[A1]=-100000.0, !bodyLook[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], closeToBar[A1], !faceLook[A1], !faceSeen[A1], facePos[A1]=[13.116096213270112, 608.9894575097227, -82.14076332642912], bodyOri[A2]=37.540882948031374, ?seeksAttention[A2], visible[A2], location[A2]=left, faceDir[A2]=-100000.0, !bodyLook[A2], !closeToBar[A2], !faceLook[A2], faceSeen[A2], facePos[A2]=[263.70538477745845, 38.5432257461226, -795.1088682696284], lastEvent[]=vision]

-- 4/26/12 11:10:33:575 state: 1: Relations: [inTrans[]=A1, bodyOri[A1]=32.0537549772773, ?seeksAttention[A1], visible[A1], location[A1]=left, faceDir[A1]=-100000.0, !bodyLook[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], closeToBar[A1], !faceLook[A1], !faceSeen[A1], facePos[A1]=[8.437952408116189, 609.1839060545792, -80.0172968193674], bodyOri[A2]=-3.747013984106482, ?seeksAttention[A2], visible[A2], location[A2]=right, faceDir[A2]=-100000.0, bodyLook[A2], closeToBar[A2], !faceLook[A2], faceSeen[A2], facePos[A2]=[281.79455357890765, -296.913677159492, -292.50457017710755], lastEvent[]=vision]

-- 4/26/12 11:10:34:987 state: 1: Relations: [inTrans[]=A1, bodyOri[A1]=-11.583843947974726, ?seeksAttention[A1], visible[A1], location[A1]=left, faceDir[A1]=-100000.0, !bodyLook[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], closeToBar[A1], !faceLook[A1], !faceSeen[A1], facePos[A1]=[1.3756208788843196, 609.8071199025117, -88.17103971510119], bodyOri[A2]=-6.480840756187899, ?seeksAttention[A2], visible[A2], location[A2]=right, faceDir[A2]=-100000.0, bodyLook[A2], closeToBar[A2], !faceLook[A2], faceSeen[A2], facePos[A2]=[287.3819382288318, -277.3744088901404, -65.69398983257884], lastEvent[]=outputDone]

-- 4/26/12 11:10:35:943 state: 1: Relations: [inTrans[]=A1, ?seeksAttention[A1], !visible[A1], location[A1]=left, !bodyLook[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], closeToBar[A1], !faceLook[A1], !faceSeen[A1], bodyOri[A2]=-100000.0, ?seeksAttention[A2], visible[A2], location[A2]=right, faceDir[A2]=-100000.0, !bodyLook[A2], closeToBar[A2], !faceLook[A2], faceSeen[A2], facePos[A2]=[283.57403173117405, -271.69581296623466, -46.66743744853693], lastEvent[]=vision]

-- 4/26/12 11:10:38:395 kinect-speech: 1: recognized: Einen Saft bitte. (0,281915664672852) 13,3450360536796 (0,572783485588801)

-- 4/26/12 11:10:38:488 state: 1: Relations: [inTrans[]=A1, bodyOri[A1]=-100000.0, ?seeksAttention[A1], visible[A1], faceDir[A1]=-100000.0, location[A1]=left, !bodyLook[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], closeToBar[A1], !faceLook[A1], facePos[A1]=[686.856514047518, 315.39432362884133, 629.5702265150175], !faceSeen[A1], bodyOri[A2]=-21.4762487815766, ?seeksAttention[A2], visible[A2], location[A2]=right, faceDir[A2]=-100000.0, !bodyLook[A2], transHistory[robotAckAttention, A2], transHistory[robotInitWait, A2], closeToBar[A2], !faceLook[A2], faceSeen[A2], facePos[A2]=[270.5183722132457, -277.2513915510068, -59.901724532091976], lastEvent[]=outputDone]

-- 4/26/12 11:10:40:495 state: 1: Relations: [inTrans[]=A1, bodyOri[A1]=-100000.0, ?seeksAttention[A1], visible[A1], faceDir[A1]=-100000.0, location[A1]=left, !bodyLook[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], closeToBar[A1], !faceLook[A1], facePos[A1]=[773.9117846428733, 279.1854539603656, 715.0256100813789], !faceSeen[A1], bodyOri[A2]=-9.63775565945233, ?seeksAttention[A2], visible[A2], location[A2]=right, faceDir[A2]=-100000.0, bodyLook[A2], transHistory[robotAckAttention, A2], transHistory[robotInitWait, A2], closeToBar[A2], !faceLook[A2], faceSeen[A2], facePos[A2]=[269.63449464252085, -279.7986815668485, -62.01936748824005], lastEvent[]=timeout]

-- 4/26/12 11:10:42:830 state: 1: Relations: [inTrans[]=A1, bodyOri[A1]=-100000.0, ?seeksAttention[A1], visible[A1], faceDir[A1]=-100000.0, location[A1]=left, !bodyLook[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], closeToBar[A1], !faceLook[A1], facePos[A1]=[842.1712473677151, 250.77759404863696, 783.4105856394966], !faceSeen[A1], bodyOri[A2]=-100000.0, ?seeksAttention[A2], visible[A2], location[A2]=right, faceDir[A2]=-100000.0, !bodyLook[A2], transHistory[robotAckAttention, A2], transHistory[robotInitWait, A2], closeToBar[A2], !faceLook[A2], faceSeen[A2], facePos[A2]=[279.24588507675116, -270.3422713241906, -43.580248464996885], lastEvent[]=outputDone]

-- 4/26/12 11:10:43:333 kinect-speech: 1: recognized: Dankeschön (0,0825322568416595) 10,9093900713086 (0,34465422395733)

-- 4/26/12 11:10:44:444 kinect-speech: 1: recognized: Eine Cola bitte. (0,882581353187561) 12,653376734383 (0,332851728383978)

-- 4/26/12 11:10:44:587 state: 1: Relations: [inTrans[]=A1, bodyOri[A1]=-100000.0, !badASR[A1], visible[A1], location[A1]=left, faceDir[A1]=-100000.0, closeToBar[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], transHistory[agentOrdered, A1], facePos[A1]=[756.6892952683486, 281.1919830494499, 704.2754276392961], ?seeksAttention[A1], !bodyLook[A1], request[A1]=coke, !faceLook[A1], !faceSeen[A1], bodyOri[A2]=68.24255561005776, ?seeksAttention[A2], visible[A2], location[A2]=right, faceDir[A2]=-100000.0, !bodyLook[A2], transHistory[robotAckAttention, A2], transHistory[robotInitWait, A2], closeToBar[A2], !faceLook[A2], faceSeen[A2], facePos[A2]=[271.57150482084364, -275.89195189473685, -53.919269594668094], lastEvent[]=userSpeech]

-- 4/26/12 11:10:45:853 state: 1: Relations: [inTrans[]=A1, !badASR[A1], !visible[A1], location[A1]=left, closeToBar[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], transHistory[agentOrdered, A1], ?seeksAttention[A1], !bodyLook[A1], request[A1]=coke, !faceLook[A1], faceSeen[A1], bodyOri[A2]=82.11993119170276, ?seeksAttention[A2], visible[A2], location[A2]=right, faceDir[A2]=-100000.0, !bodyLook[A2], transHistory[robotAckAttention, A2], transHistory[robotInitWait, A2], closeToBar[A2], !faceLook[A2], faceSeen[A2], facePos[A2]=[278.0700061024352, -278.56572111075724, -49.96867709980074], lastEvent[]=vision]

-- 4/26/12 11:10:47:287 state: 1: Relations: [inTrans[]=A1, !badASR[A1], !visible[A1], location[A1]=left, closeToBar[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], transHistory[agentOrdered, A1], transHistory[robotServed, A1], ?seeksAttention[A1], !bodyLook[A1], request[A1]=coke, !faceLook[A1], faceSeen[A1], bodyOri[A2]=-18.115372460125265, ?seeksAttention[A2], visible[A2], location[A2]=right, faceDir[A2]=-100000.0, !bodyLook[A2], transHistory[robotAckAttention, A2], transHistory[robotInitWait, A2], closeToBar[A2], !faceLook[A2], faceSeen[A2], facePos[A2]=[269.02191920492464, -267.66148018619543, -40.37156932641278], lastEvent[]=outputDone]

-- 4/26/12 11:10:52:290 state: 1: Relations: [inTrans[]=A1, bodyOri[A1]=10.619239187369967, !badASR[A1], visible[A1], faceDir[A1]=-100000.0, location[A1]=left, closeToBar[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], transHistory[agentOrdered, A1], transHistory[robotServed, A1], facePos[A1]=[-6.206971627320627, 608.114014521623, -54.35917826834657], ?seeksAttention[A1], !bodyLook[A1], request[A1]=coke, !faceLook[A1], !faceSeen[A1], bodyOri[A2]=-100000.0, ?seeksAttention[A2], visible[A2], location[A2]=right, faceDir[A2]=-100000.0, !bodyLook[A2], transHistory[robotAckAttention, A2], transHistory[robotInitWait, A2], closeToBar[A2], !faceLook[A2], faceSeen[A2], facePos[A2]=[250.0079789863969, -262.634058198383, -39.93486631619703], lastEvent[]=timeout]

-- 4/26/12 11:11:04:506 state: 1: Relations: [inTrans[]=A1, !badASR[A1], !visible[A1], location[A1]=left, closeToBar[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], transHistory[agentOrdered, A1], transHistory[robotServed, A1], ?seeksAttention[A1], !bodyLook[A1], request[A1]=coke, !faceLook[A1], faceSeen[A1], bodyOri[A2]=-10.080709498781486, ?seeksAttention[A2], visible[A2], location[A2]=right, faceDir[A2]=-100000.0, !bodyLook[A2], transHistory[robotAckAttention, A2], transHistory[robotInitWait, A2], closeToBar[A2], !faceLook[A2], faceSeen[A2], facePos[A2]=[282.08107198136463, -261.8724627458353, -26.054819190603894], lastEvent[]=vision]

-- 4/26/12 11:11:08:207 state: 1: Relations: [inTrans[]=nil, bodyOri[A1]=-100000.0, !badASR[A1], visible[A1], faceDir[A1]=-100000.0, location[A1]=left, closeToBar[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], transHistory[agentOrdered, A1], transHistory[robotServed, A1], transHistory[transComplete, A1], facePos[A1]=[216.4267401897407, 959.1004369116554, -90.56278987190058], ?seeksAttention[A1], !bodyLook[A1], request[A1]=coke, !faceLook[A1], faceSeen[A1], bodyOri[A2]=-16.32939910376009, ?seeksAttention[A2], visible[A2], location[A2]=right, faceDir[A2]=-100000.0, !bodyLook[A2], transHistory[robotAckAttention, A2], transHistory[robotInitWait, A2], closeToBar[A2], !faceLook[A2], faceSeen[A2], facePos[A2]=[279.27202569536166, -269.1882889451255, -32.69277986121233], lastEvent[]=outputDone]

-- 4/26/12 11:11:08:215 state: 1: Relations: [inTrans[]=nil, !badASR[A1], !visible[A1], location[A1]=left, closeToBar[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], transHistory[agentOrdered, A1], transHistory[robotServed, A1], transHistory[transComplete, A1], ?seeksAttention[A1], !bodyLook[A1], request[A1]=coke, !faceLook[A1], faceSeen[A1], bodyOri[A2]=-18.03619760396719, ?seeksAttention[A2], visible[A2], location[A2]=right, faceDir[A2]=-100000.0, !bodyLook[A2], transHistory[robotAckAttention, A2], transHistory[robotInitWait, A2], closeToBar[A2], !faceLook[A2], faceSeen[A2], facePos[A2]=[277.3308549041094, -269.48136826804915, -34.42215889993054], lastEvent[]=vision]

-- 4/26/12 11:11:09:130 state: 1: Relations: [inTrans[]=A2, !badASR[A1], !visible[A1], location[A1]=left, closeToBar[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], transHistory[agentOrdered, A1], transHistory[robotServed, A1], transHistory[transComplete, A1], ?seeksAttention[A1], !bodyLook[A1], request[A1]=coke, !faceLook[A1], faceSeen[A1], bodyOri[A2]=-29.66793766341228, ?seeksAttention[A2], visible[A2], location[A2]=right, faceDir[A2]=-100000.0, !bodyLook[A2], transHistory[robotAckAttention, A2], transHistory[robotGreeted, A2], closeToBar[A2], !faceLook[A2], faceSeen[A2], facePos[A2]=[269.8435082009337, -270.92311946339174, -41.593320697918216], lastEvent[]=outputDone]

-- 4/26/12 11:11:09:558 kinect-speech: 1: recognized: Tschüss (0,00523450970649719) 1,68541091861772 (0,42538334025899)

-- 4/26/12 11:11:11:002 state: 1: Relations: [inTrans[]=A2, bodyOri[A1]=-100000.0, !badASR[A1], visible[A1], faceDir[A1]=-100000.0, location[A1]=left, closeToBar[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], transHistory[agentOrdered, A1], transHistory[robotServed, A1], transHistory[transComplete, A1], facePos[A1]=[68.42998763474543, 1028.7090018101596, -253.38948597237845], ?seeksAttention[A1], !bodyLook[A1], request[A1]=coke, !faceLook[A1], !faceSeen[A1], bodyOri[A2]=-18.466527810738064, ?seeksAttention[A2], visible[A2], location[A2]=right, faceDir[A2]=-100000.0, !bodyLook[A2], transHistory[robotAckAttention, A2], transHistory[robotGreeted, A2], closeToBar[A2], !faceLook[A2], faceSeen[A2], facePos[A2]=[265.74745129177245, -278.8995101264301, -50.45813910316042], lastEvent[]=outputDone]

-- 4/26/12 11:11:11:085 kinect-speech: 1: recognized: a coke please (0,314753651618958) 9,99018806193885 (0,345700793584524)

-- 4/26/12 11:11:13:005 state: 1: Relations: [inTrans[]=A2, bodyOri[A1]=-100000.0, !badASR[A1], visible[A1], faceDir[A1]=-100000.0, location[A1]=left, !closeToBar[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], transHistory[agentOrdered, A1], transHistory[robotServed, A1], transHistory[transComplete, A1], facePos[A1]=[-176.89975231008634, 1222.5116056138404, -526.5477338534386], ?seeksAttention[A1], !bodyLook[A1], request[A1]=coke, !faceLook[A1], !faceSeen[A1], bodyOri[A2]=-12.132336540452602, ?seeksAttention[A2], visible[A2], location[A2]=right, faceDir[A2]=-100000.0, !bodyLook[A2], transHistory[robotAckAttention, A2], transHistory[robotGreeted, A2], closeToBar[A2], !faceLook[A2], faceSeen[A2], facePos[A2]=[251.23243576509162, -269.2006389656237, 29.36207557070361], lastEvent[]=timeout]

-- 4/26/12 11:11:13:293 state: 1: Relations: [inTrans[]=A2, !badASR[A1], !visible[A1], location[A1]=left, !closeToBar[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], transHistory[agentOrdered, A1], transHistory[robotServed, A1], transHistory[transComplete, A1], ?seeksAttention[A1], !bodyLook[A1], request[A1]=coke, !faceLook[A1], !faceSeen[A1], bodyOri[A2]=-12.022028353948071, ?seeksAttention[A2], visible[A2], location[A2]=right, faceDir[A2]=-100000.0, !bodyLook[A2], transHistory[robotAckAttention, A2], transHistory[robotGreeted, A2], closeToBar[A2], !faceLook[A2], faceSeen[A2], facePos[A2]=[259.78776833636266, -264.3813279644921, 30.373588236523346], lastEvent[]=vision]

-- 4/26/12 11:11:15:345 state: 1: Relations: [inTrans[]=A2, !badASR[A1], !visible[A1], location[A1]=left, !closeToBar[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], transHistory[agentOrdered, A1], transHistory[robotServed, A1], transHistory[transComplete, A1], ?seeksAttention[A1], !bodyLook[A1], request[A1]=coke, !faceLook[A1], !faceSeen[A1], bodyOri[A2]=-29.883971660903008, ?seeksAttention[A2], visible[A2], location[A2]=right, faceDir[A2]=-100000.0, !bodyLook[A2], transHistory[robotAckAttention, A2], transHistory[robotGreeted, A2], closeToBar[A2], !faceLook[A2], faceSeen[A2], facePos[A2]=[259.50271401965915, -270.7082528449195, 19.811440174686368], lastEvent[]=outputDone]

-- 4/26/12 11:11:15:459 kinect-speech: 1: recognized: Ich möchte bitte einen Saft. (0,685819685459137) 12,6816700889885 (0,423772867085129)

-- 4/26/12 11:11:17:617 kinect-speech: 1: recognized: a juice (0,938063740730286) -5,7520948608188 (1)

-- 4/26/12 11:11:17:636 state: 1: Relations: [inTrans[]=A2, !badASR[A1], !visible[A1], location[A1]=left, !closeToBar[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], transHistory[agentOrdered, A1], transHistory[robotServed, A1], transHistory[transComplete, A1], ?seeksAttention[A1], !bodyLook[A1], request[A1]=coke, !faceLook[A1], !faceSeen[A1], bodyOri[A2]=-100000.0, !badASR[A2], visible[A2], faceDir[A2]=-100000.0, location[A2]=right, closeToBar[A2], transHistory[robotAckAttention, A2], transHistory[robotGreeted, A2], transHistory[agentOrdered, A2], facePos[A2]=[258.22570474306417, -269.19146508324394, 18.534254928074006], ?seeksAttention[A2], !bodyLook[A2], request[A2]=juice, !faceLook[A2], faceSeen[A2], lastEvent[]=userSpeech]

-- 4/26/12 11:11:20:378 state: 1: Relations: [inTrans[]=A2, bodyOri[A1]=-100000.0, !badASR[A1], visible[A1], faceDir[A1]=-100000.0, location[A1]=left, closeToBar[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], transHistory[agentOrdered, A1], transHistory[robotServed, A1], transHistory[transComplete, A1], facePos[A1]=[597.1576856674974, 560.6071751190175, 462.2304771025151], ?seeksAttention[A1], !bodyLook[A1], request[A1]=coke, !faceLook[A1], !faceSeen[A1], bodyOri[A2]=-100000.0, !badASR[A2], visible[A2], faceDir[A2]=-100000.0, location[A2]=right, closeToBar[A2], transHistory[robotAckAttention, A2], transHistory[robotGreeted, A2], transHistory[agentOrdered, A2], transHistory[robotServed, A2], facePos[A2]=[230.46347816171522, -254.7726036141775, 21.36491480038285], ?seeksAttention[A2], !bodyLook[A2], request[A2]=juice, !faceLook[A2], faceSeen[A2], lastEvent[]=outputDone]

-- 4/26/12 11:11:20:493 kinect-speech: 1: recognized: Dankeschön (0,039694607257843) 10,9996584007197 (0,470472384019854)

-- 4/26/12 11:11:21:425 state: 1: Relations: [inTrans[]=A2, !badASR[A1], !visible[A1], location[A1]=left, closeToBar[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], transHistory[agentOrdered, A1], transHistory[robotServed, A1], transHistory[transComplete, A1], ?seeksAttention[A1], !bodyLook[A1], request[A1]=coke, !faceLook[A1], !faceSeen[A1], bodyOri[A2]=-100000.0, !badASR[A2], visible[A2], faceDir[A2]=-100000.0, location[A2]=right, closeToBar[A2], transHistory[robotAckAttention, A2], transHistory[robotGreeted, A2], transHistory[agentOrdered, A2], transHistory[robotServed, A2], facePos[A2]=[228.01952432998382, -256.1573049241485, 19.223286877171404], ?seeksAttention[A2], !bodyLook[A2], request[A2]=juice, !faceLook[A2], faceSeen[A2], lastEvent[]=vision]

-- 4/26/12 11:11:24:393 state: 1: Relations: [inTrans[]=A2, !badASR[A1], !visible[A1], location[A1]=left, closeToBar[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], transHistory[agentOrdered, A1], transHistory[robotServed, A1], transHistory[transComplete, A1], ?seeksAttention[A1], !bodyLook[A1], request[A1]=coke, !faceLook[A1], !faceSeen[A1], bodyOri[A2]=-100000.0, !badASR[A2], visible[A2], faceDir[A2]=-100000.0, location[A2]=right, closeToBar[A2], transHistory[robotAckAttention, A2], transHistory[robotGreeted, A2], transHistory[agentOrdered, A2], transHistory[robotServed, A2], facePos[A2]=[222.43112125026073, -255.4267205597365, 23.84903550442482], ?seeksAttention[A2], !bodyLook[A2], request[A2]=juice, !faceLook[A2], faceSeen[A2], lastEvent[]=vision]

-- 4/26/12 11:11:27:692 state: 1: Relations: [inTrans[]=A2, !badASR[A1], !visible[A1], location[A1]=left, closeToBar[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], transHistory[agentOrdered, A1], transHistory[robotServed, A1], transHistory[transComplete, A1], ?seeksAttention[A1], !bodyLook[A1], request[A1]=coke, !faceLook[A1], faceSeen[A1], bodyOri[A2]=-41.57485333764966, !badASR[A2], visible[A2], faceDir[A2]=-100000.0, location[A2]=right, closeToBar[A2], transHistory[robotAckAttention, A2], transHistory[robotGreeted, A2], transHistory[agentOrdered, A2], transHistory[robotServed, A2], facePos[A2]=[226.55966061456047, -257.7160828332674, 21.135191096589324], ?seeksAttention[A2], !bodyLook[A2], request[A2]=juice, !faceLook[A2], faceSeen[A2], lastEvent[]=vision]

-- 4/26/12 11:11:31:741 state: 1: Relations: [inTrans[]=A2, !badASR[A1], !visible[A1], location[A1]=left, closeToBar[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], transHistory[agentOrdered, A1], transHistory[robotServed, A1], transHistory[transComplete, A1], ?seeksAttention[A1], !bodyLook[A1], request[A1]=coke, !faceLook[A1], !faceSeen[A1], bodyOri[A2]=-19.4143676912881, !badASR[A2], visible[A2], faceDir[A2]=-100000.0, location[A2]=right, closeToBar[A2], transHistory[robotAckAttention, A2], transHistory[robotGreeted, A2], transHistory[agentOrdered, A2], transHistory[robotServed, A2], facePos[A2]=[222.86984914738116, -247.45129572435957, -8.853647535737991], ?seeksAttention[A2], !bodyLook[A2], request[A2]=juice, !faceLook[A2], faceSeen[A2], lastEvent[]=vision]

-- 4/26/12 11:11:41:306 state: 1: Relations: [inTrans[]=nil, bodyOri[A1]=-100000.0, !badASR[A1], visible[A1], faceDir[A1]=-100000.0, location[A1]=left, closeToBar[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], transHistory[agentOrdered, A1], transHistory[robotServed, A1], transHistory[transComplete, A1], facePos[A1]=[660.9139072022265, 494.2966233427158, 561.7378637718438], ?seeksAttention[A1], !bodyLook[A1], request[A1]=coke, !faceLook[A1], !faceSeen[A1], bodyOri[A2]=-100000.0, !badASR[A2], visible[A2], faceDir[A2]=-100000.0, location[A2]=right, closeToBar[A2], transHistory[robotAckAttention, A2], transHistory[robotGreeted, A2], transHistory[agentOrdered, A2], transHistory[robotServed, A2], transHistory[transComplete, A2], facePos[A2]=[283.36932196608814, -426.9544626558899, -121.81771671730053], ?seeksAttention[A2], !bodyLook[A2], request[A2]=juice, !faceLook[A2], faceSeen[A2], lastEvent[]=outputDone]

-- 4/26/12 11:11:41:856 kinect-speech: 1: recognized: Auf Wiedersehen (0,101719476282597) -1,54182686551049 (0,317173146349584)

-- 4/26/12 11:11:42:080 state: 1: Relations: [inTrans[]=nil, bodyOri[A1]=-100000.0, !badASR[A1], visible[A1], faceDir[A1]=-100000.0, location[A1]=left, closeToBar[A1], transHistory[robotAckAttention, A1], transHistory[robotGreeted, A1], transHistory[agentOrdered, A1], transHistory[robotServed, A1], transHistory[transComplete, A1], facePos[A1]=[995.9308535433329, 254.21260272561935, 951.0358097907294], ?seeksAttention[A1], !bodyLook[A1], request[A1]=coke, !faceLook[A1], !faceSeen[A1], bodyOri[A2]=-100000.0, !badASR[A2], visible[A2], faceDir[A2]=-100000.0, location[A2]=right, closeToBar[A2], transHistory[robotAckAttention, A2], transHistory[robotGreeted, A2], transHistory[agentOrdered, A2], transHistory[robotServed, A2], transHistory[transComplete, A2], facePos[A2]=[294.21016438791344, -430.9248132569284, -161.52224767191774], ?seeksAttention[A2], !bodyLook[A2], request[A2]=juice, !faceLook[A2], faceSeen[A2], lastEvent[]=outputDone]

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