Close encounters: When Daniel123 met Jane234 (w/ video)

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(PhysOrg.com) -- Qbo robots created a stir recently when their developers succeeded in demonstrating that a Qbo can be trained to recognize itself in the mirror. Now the developers have taken their explorations into simulated consciousness a step further. A pair of Qbo robots, colored differently but still two Qbo entities, can recognize each other. Just as human earthling Harry met Sally, Qbo Daniel can meet Jane and they can exchange similarly empty-headed conversation.

Always posing the question what-if, Francisco Paz and his Madrid based team, The Corpora, developers of the Qbo, work with Qbo as a robot project. The accent is not on robots with human consciousness but on robots with simulated consciousness. Nonetheless, always asking the question what-if, they posed a teaser for themselves.

Now that they got the robot to recognize itself in the mirror, what about when one Qbo is faced with another Qbo, stacking them both with sensors and recognition software?

The Qbo is generally described as open source; it runs on Linux, has two cameras with stereoscopic vision and uses recognition software.

They developed bots that talk to each other through Festival, a speech synthesis system, and Julius, a speech recognition engine. In their latest Qbo scenario, a green Daniel123, unaware that a Jane might be on life's table, is told by its master to turn around, and that is when it encounters blue Jane 234. Daniel appears to be aware that Jane is a Qbo. Daniel and Jane sniff each other out, so to speak, by being programmed to generate nose flashes, to distinguish that there is another individual robot.

The sniffing explanations make it tempting to imagine that the robots are independently flirting. The danger is to attribute human consciousness to robots that are not designed that way. Daniel may be able to understand it's Jane, not himself, in the mirror, but only because it has been programmed that way by a clever human.

The Corpora team is the first to dispel any magical human consciousness. They detail what makes Daniel and Jane see each other as separate, but approachable, on the team blog:

"Inspired by this process of self-recognition in humans, we developed a new ROS [robot operating system] that is executed when the node "Object

Recognizer," previously trained, has identified a Qbo in the image. Using nose signals to see if the image seen by the robot matches its action, a Qbo can tell in real time whether he sees his image reflected in a mirror or he is watching another Qbo robot in front of him. The sequence of flashes of the nose is randomly generated in each process of recognition, so the probability that two robots generate the same sequence is very low, and even lower that they start to transmit it at the same time."

More information: thecorpora.com/blog/?p=854