Agent dialogues – portfolio activity

Activity Guidance

Create an agent dialogue, using KQML and KIF, between two agents (named Alice and Bob).

Alice is an agent designed to procure stock and Bob is an agent that controls the stock levels for a warehouse. This dialogue should see Alice asking Bob about the available stock of 50 inch televisions, and also querying the number of HDMI slots the televisions have.

Add your completed answers to your e-Portfolio.

Learning Outcomes

- An understanding of the motivations for, and appropriate use of, agent-based computing.
- An understanding of the main agent models in use today and their grounding in artificial intelligence research.

Exercise:

```
(tell
 :sender Alice
 :receiver Bob
 :content (query-stock "50-inch television")
 :language KIF
)

(reply
 :sender Bob
 :receiver Alice
 :content (= (available-stock "50-inch television") 15)
 :language KIF
)

(ask-one
 :sender Alice
 :receiver Bob
 :content (number-of-hdmi-slots "50-inch television")
```

```
 :language KIF
)

(reply
 :sender Bob
 :receiver Alice
 :content (= (number-of-hdmi-slots "50-inch television") 4)
 :language KIF
)

(ask-if
 :sender Alice
 :receiver Bob
 :content (> (available-stock "50-inch television") 10)
 :language KIF
)

(reply
 :sender Bob
 :receiver Alice
 :content (true)
 :language KIF
)

(tell
 :sender Alice
 :receiver Bob
 :content (request-restock "50-inch television" 20)
 :language KIF
)
```

```
(reply
 :sender Bob
 :receiver Alice
 :content (confirm-restock-request "50-inch television" 20)
 :language KIF
)
```

This dialogue demonstrates the following:

1. Alice asks Bob about the available stock of 50-inch televisions.
2. Bob replies with the current stock level (15 units).
3. Alice queries the number of HDMI slots on the televisions.
4. Bob responds that the 50-inch televisions have 4 HDMI slots.
5. Alice asks if there are more than 10 units in stock.
6. Bob confirms this is true.
7. Alice requests a restock of 20 more units.
8. Bob confirms the restock request.