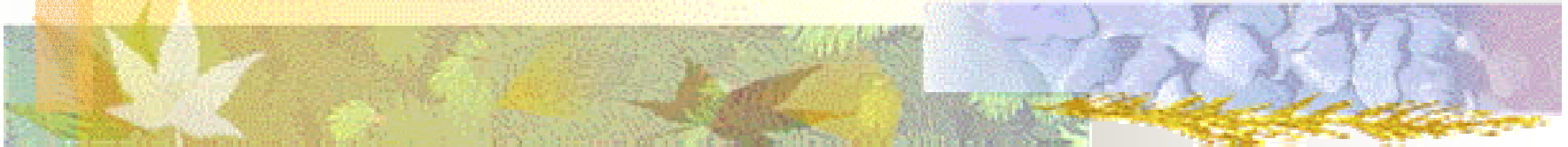


Agent-Based House-Buying System Demonstration



Hidehito Gomi and Daishi Kato, *NEC Corp*

Kyohei Kawazoe, *INTEC Web and Genome Corp*

Rada Chikorva, Jung Ung Min, Keesoo Kim, and
Waqar Mohsin, *Stanford University*



Overview

- Objective of demo
- Agent-based house-buying scenario
- System architecture
 - MobidgerLite
 - Infomaster
 - JATLite
- Agent communications among MobidgerLite, Infomaster, and JATLite
- Message translations
- Distributed agents on wired and wireless network
- Screen shots



Objective of Demo

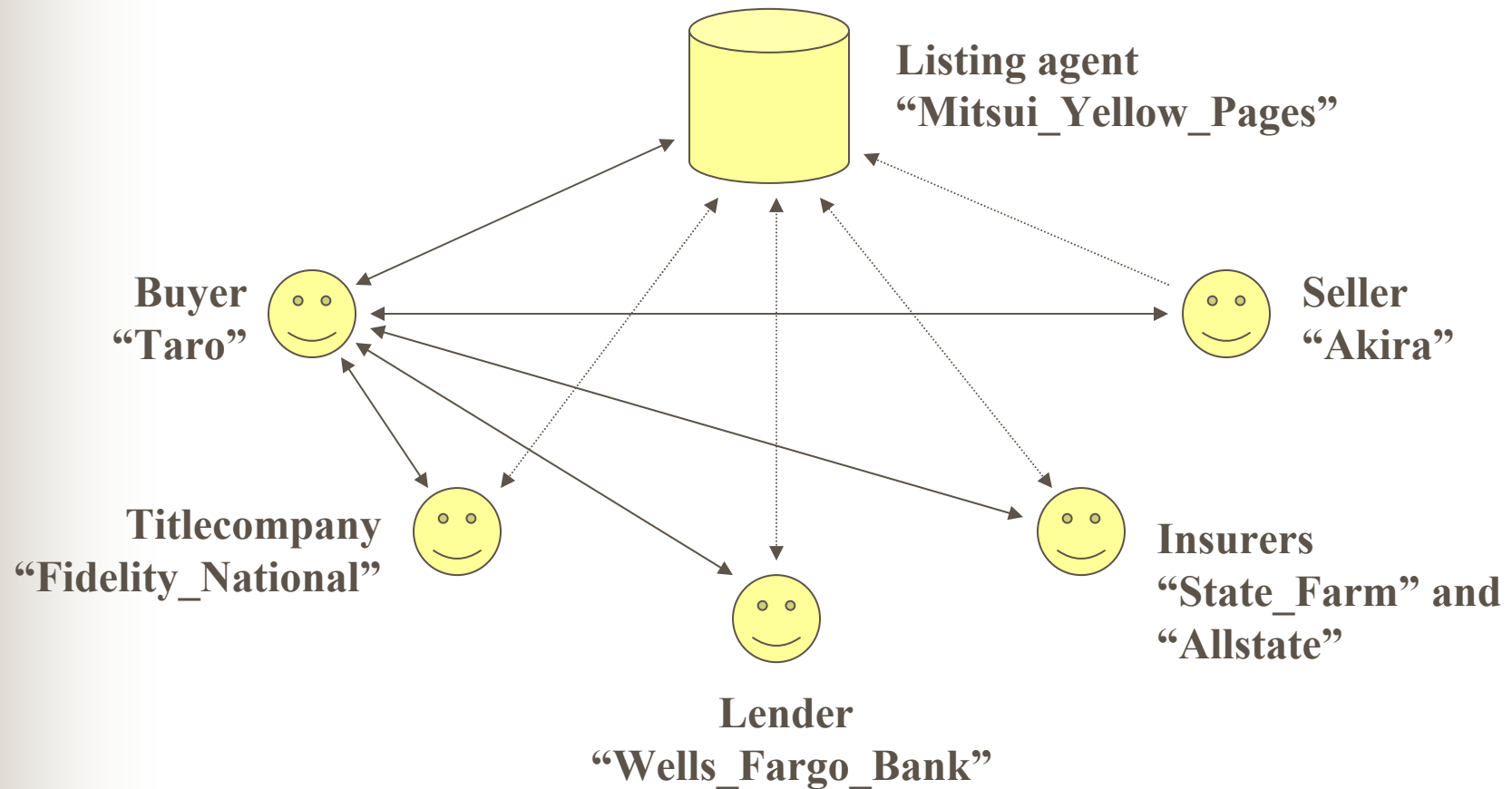
- Mission of FX-Agents Research

- To construct an extensible open e-marketplace and populate it with working autonomous software agents for the financial domain.

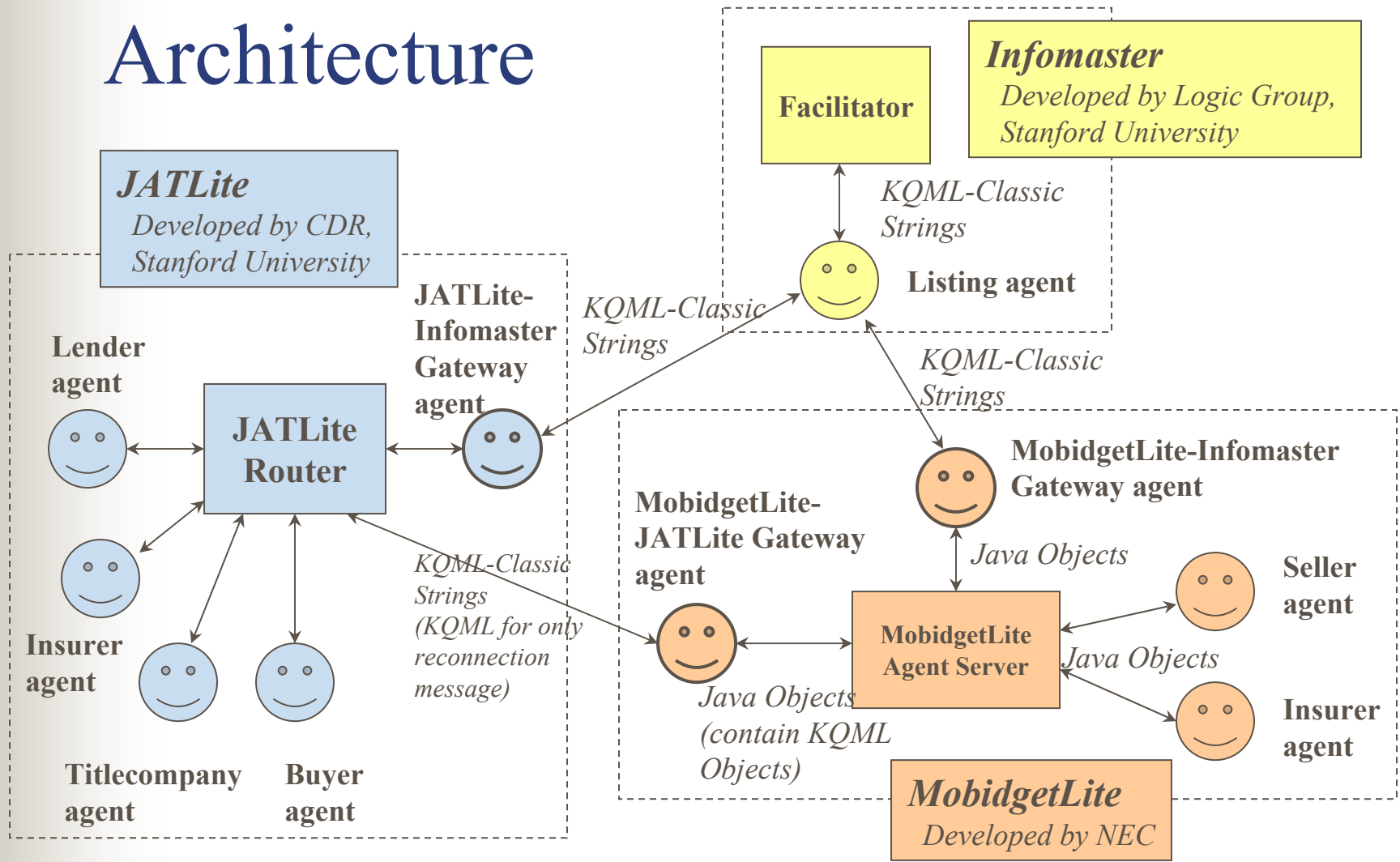
- Objective of Demo

- To construct **an example of** extensible open e-marketplace and populated it with **limited numbers** of working autonomous software agents for **the real estate market, as an instance of** the financial domain.

Agent-Based House-Buying Scenario

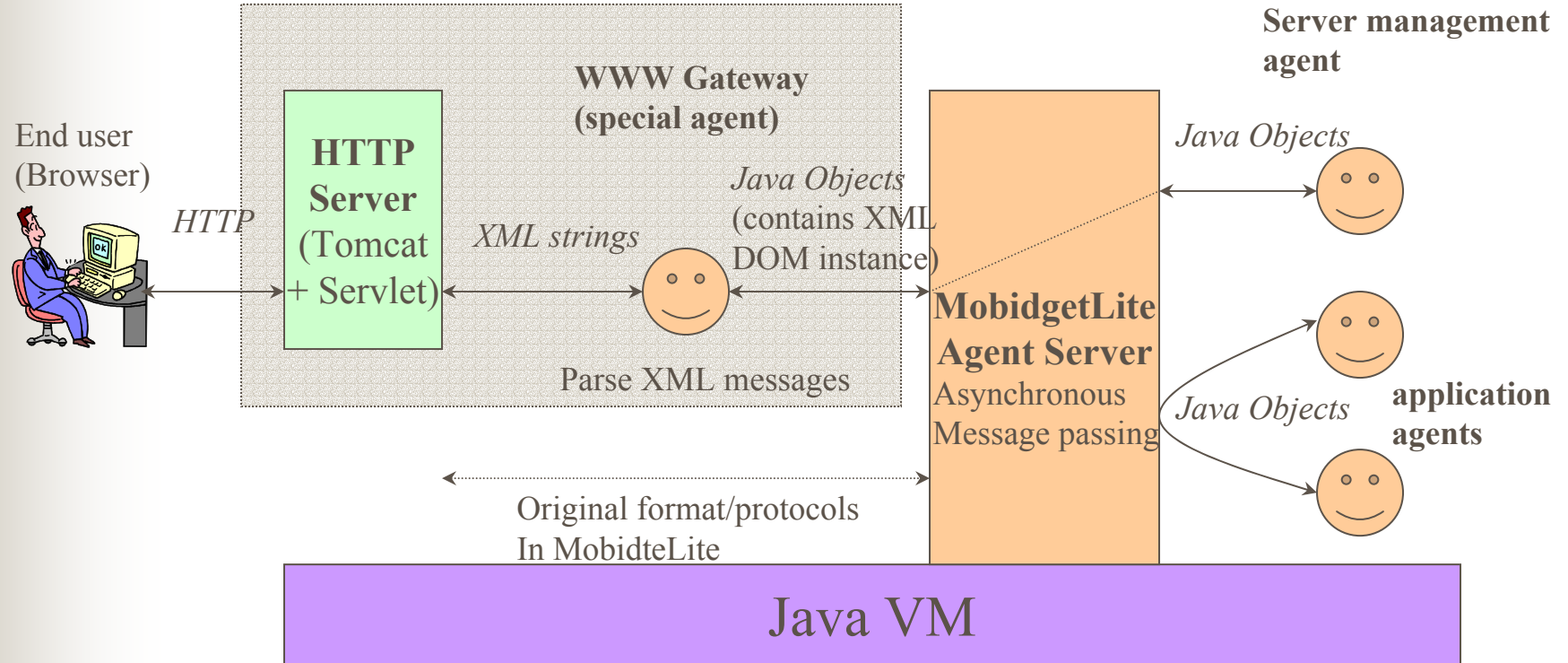


System Architecture



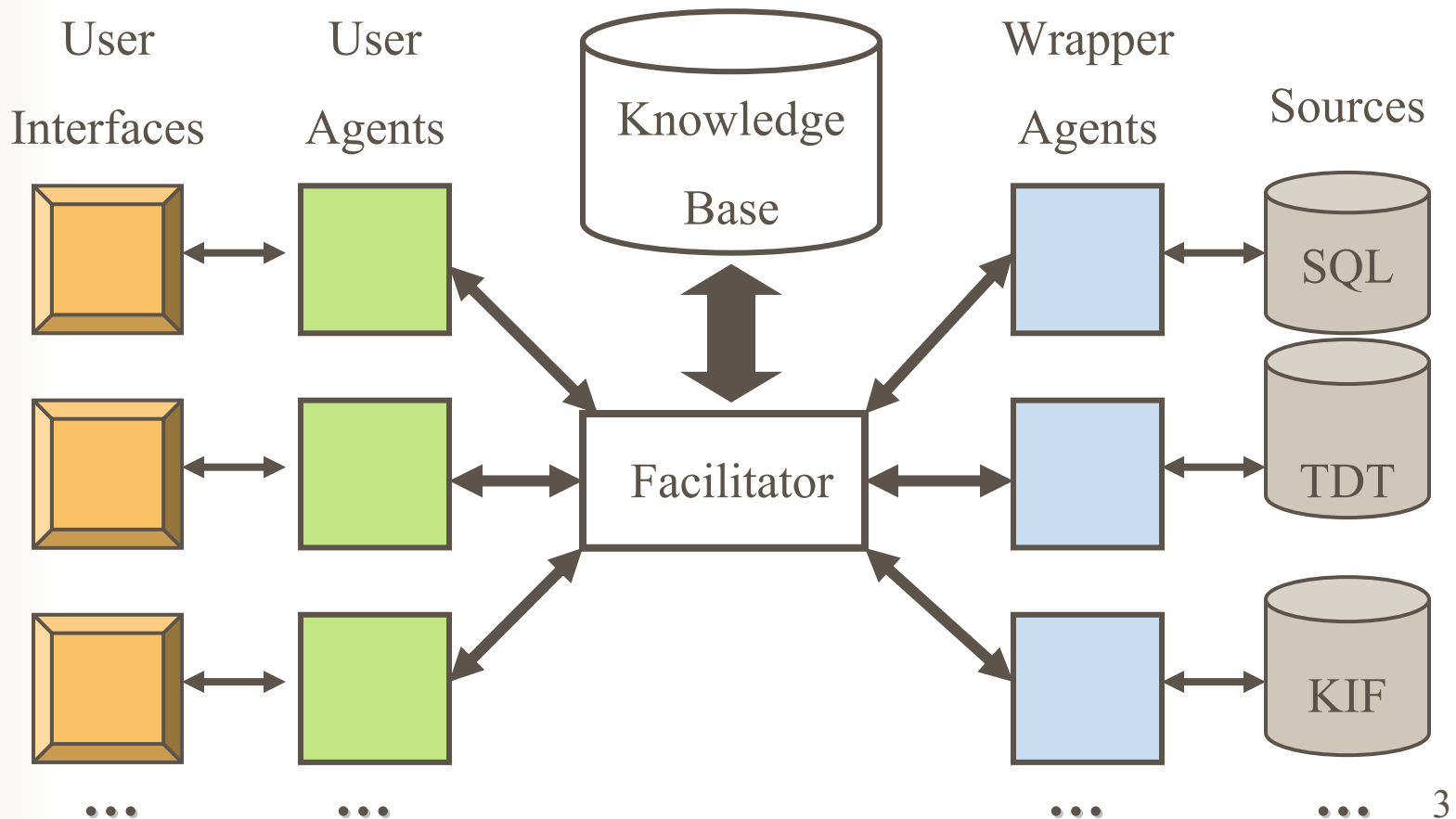
MobidgetLite: An Agent Server for E-Commerce

An example of applications by MobidgetLite

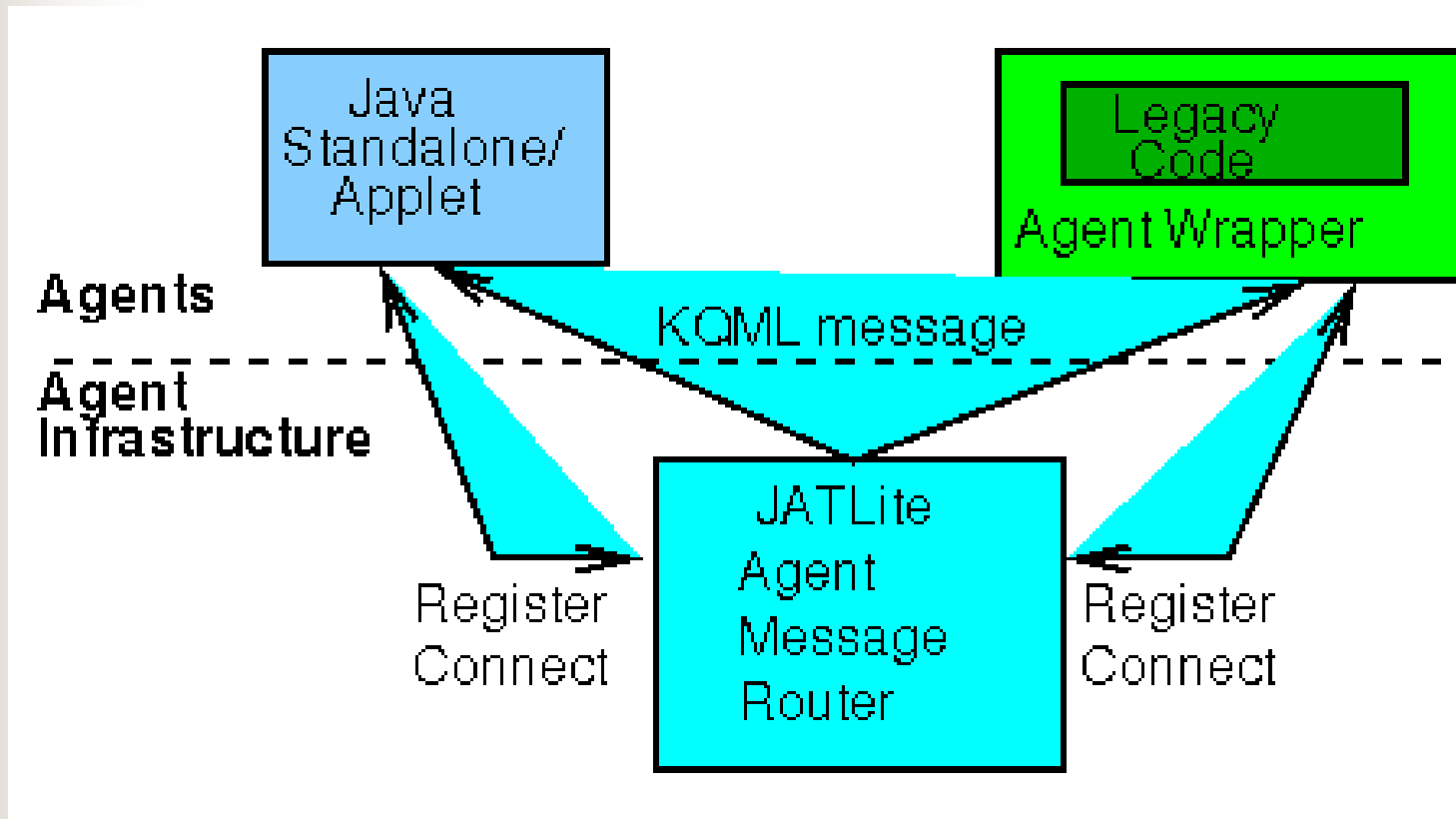


Languages used in agent communication depends on implementation of agents

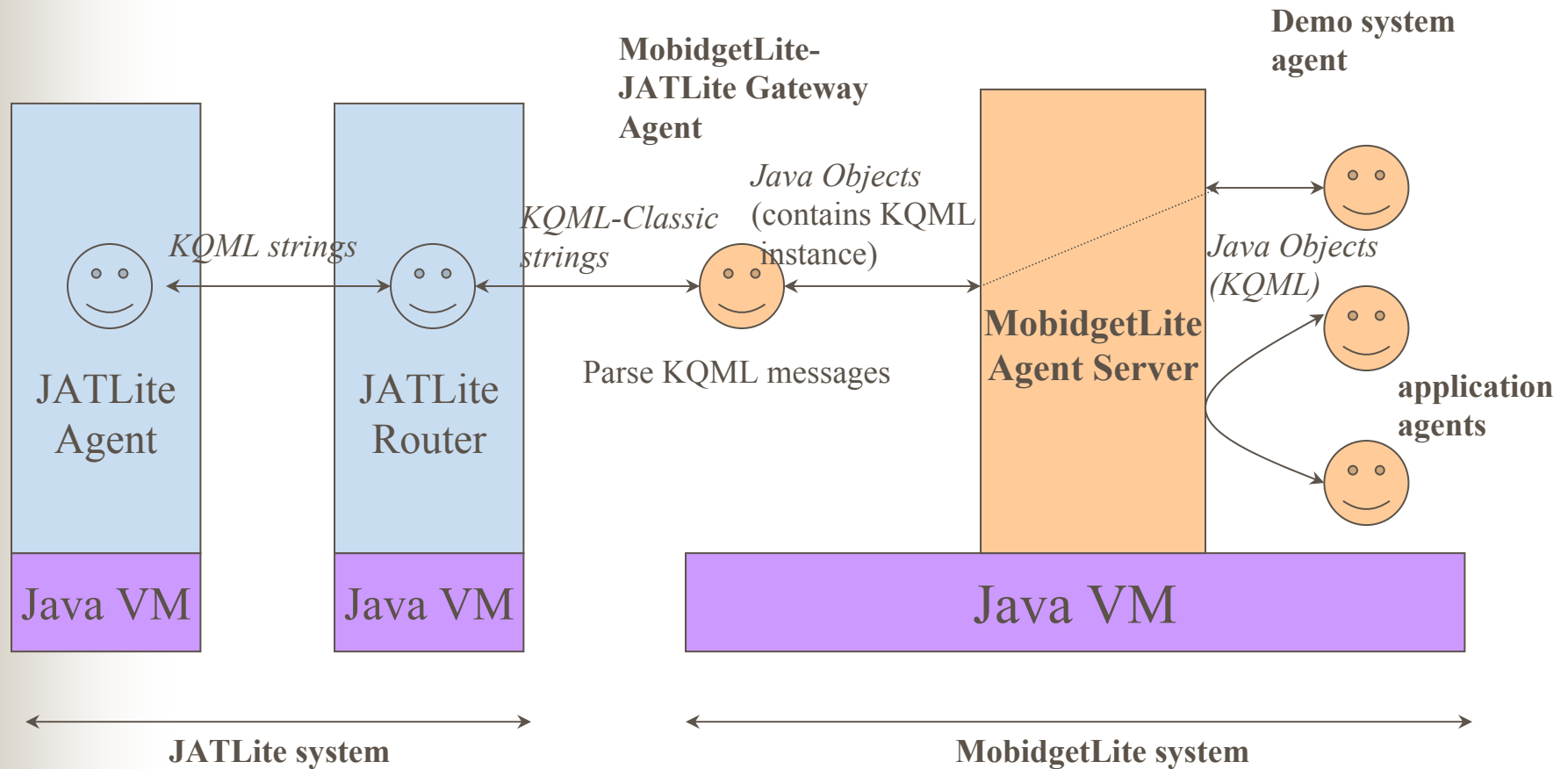
Infomaster: An Information Integration System



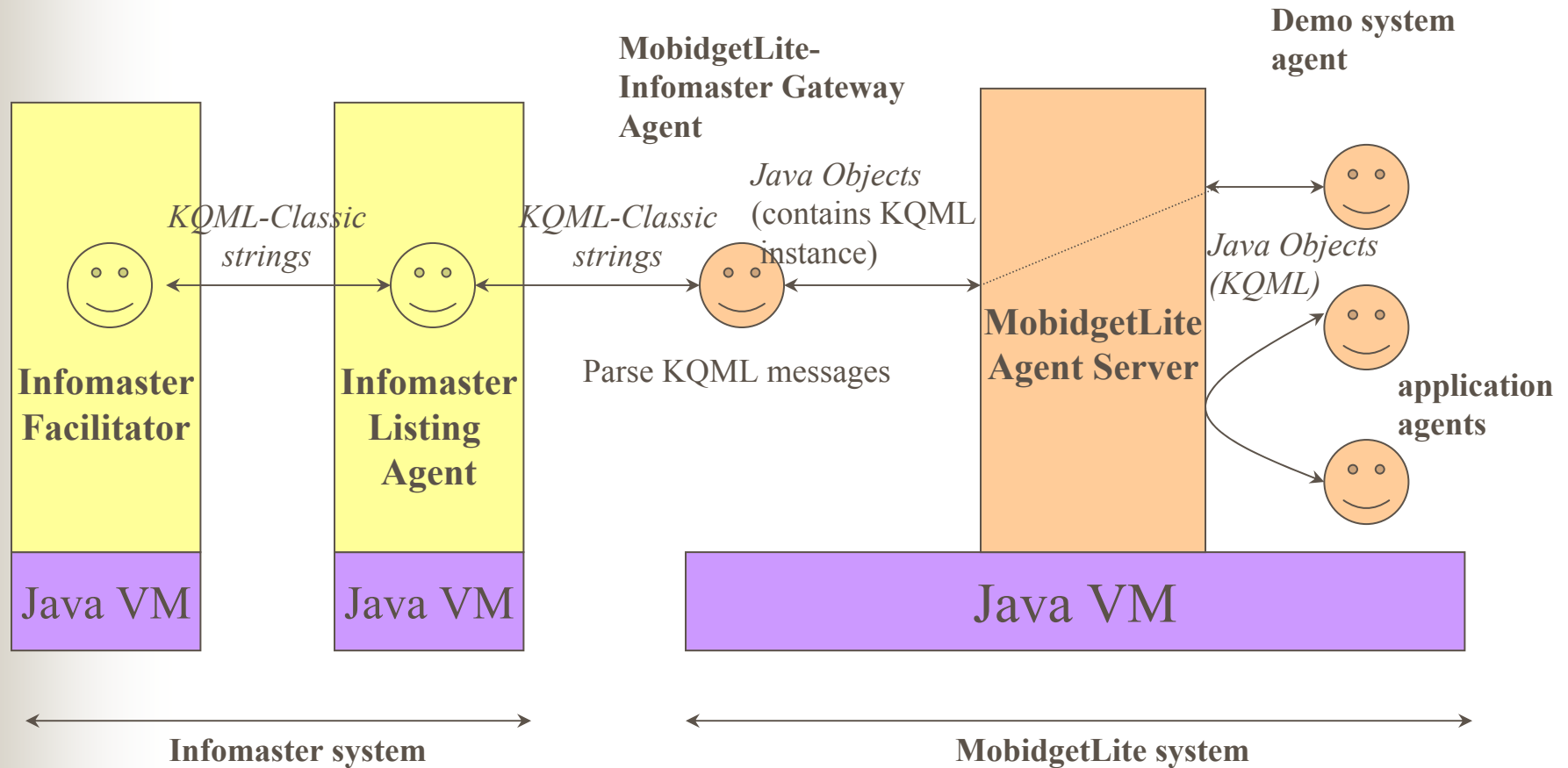
JATLite: A Java Agent Infrastructure with Message Routing



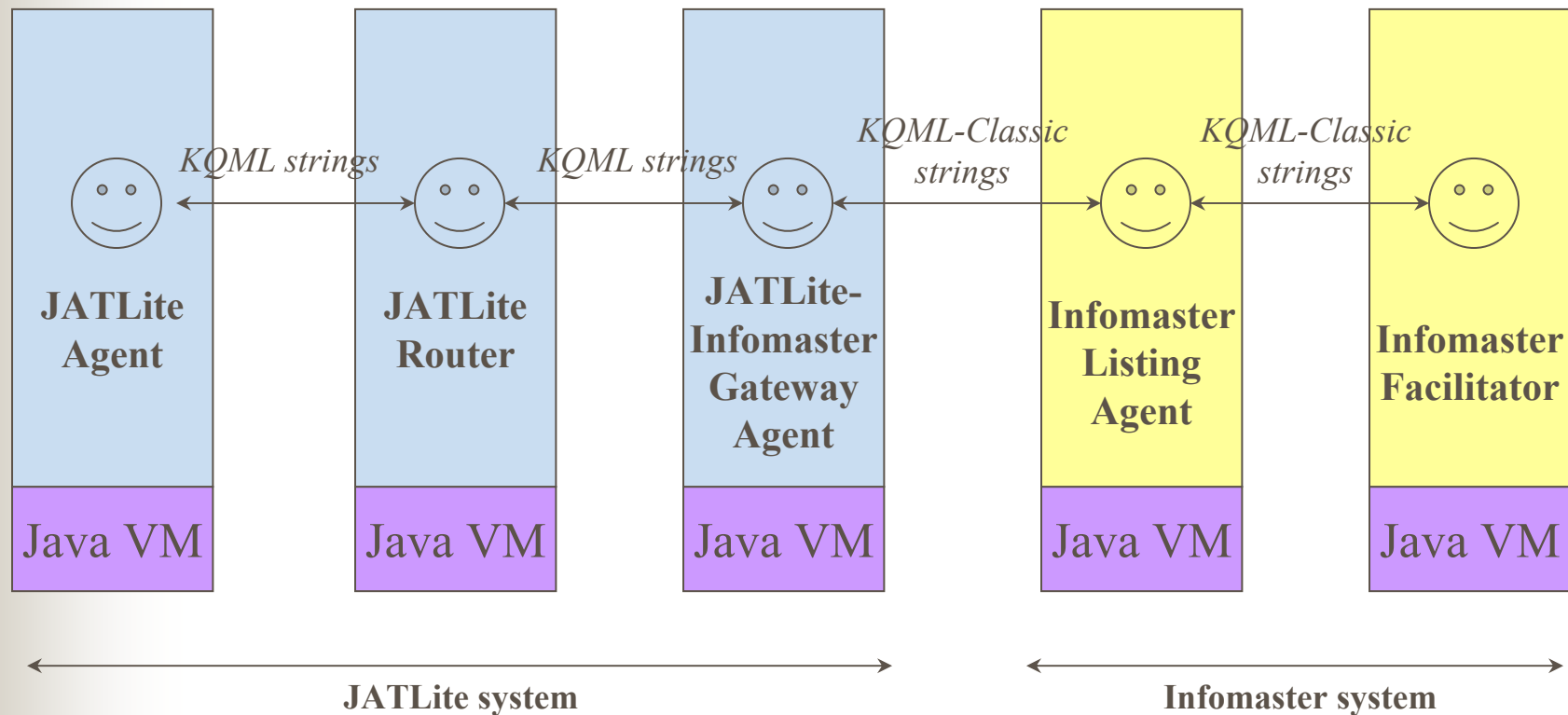
Agent Communication between MobidgetLite and JATLite



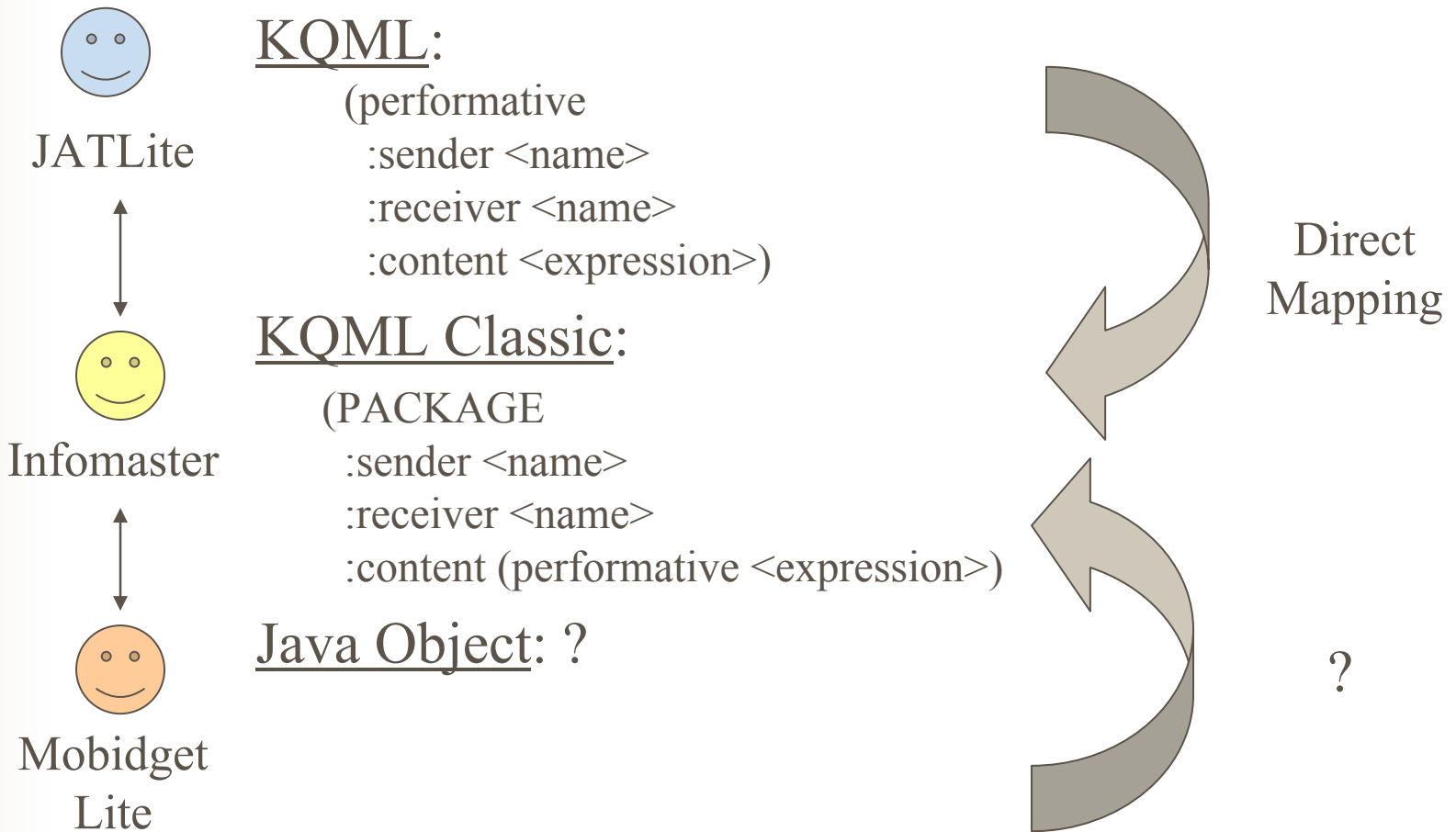
Agent Communication between MobidgetLite and Infomaster



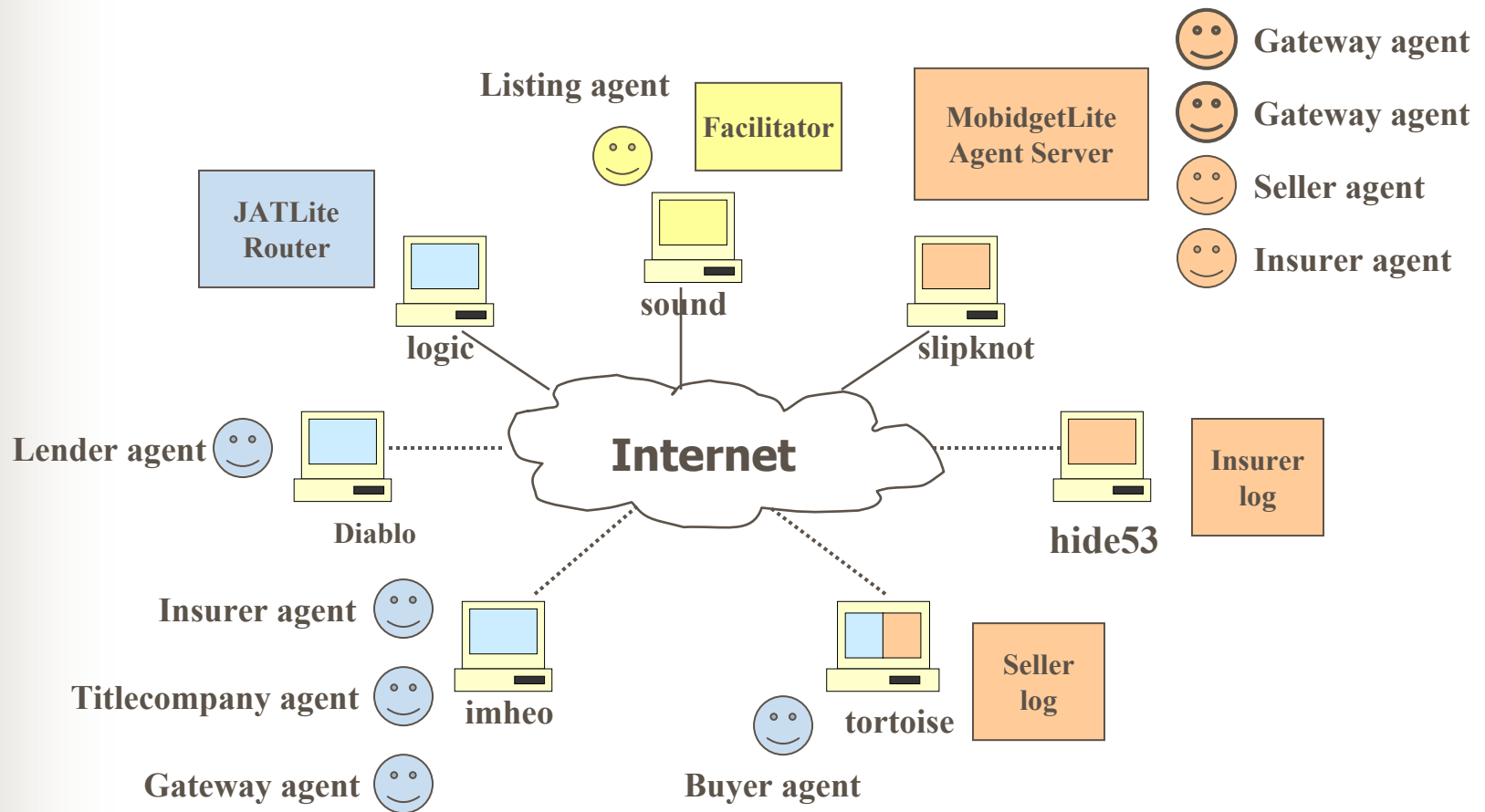
Agent Communication between JATLite and Infomaster



Message Translation



Distributed Agents on Wired and Wireless Network



Screen Shot @ imheo

JATLite-
Infomaster
Gateway agent

JATLite Router
@logic

```
l) :receiver MITSUI_YELLOW_PAGES :reply-with 0)
-----
sender: laro
replyStr: (PACKAGE :SENDER MITSUI_YELLOW_PAGES :RECEIVER TARD :IN-REPLY-TO 4
MITEM (REPLY (ARIM "123 Mission St" Fairfax 2 2 420000)))
Sending message
Sending success
Sending message
Sending success
Message String =N 1003790531314 (PACKAGE :sender laro :content (ASK-ALL ?X (IS
?X TITLECOMPANY)) :receiver MITSUI_YELLOW_PAGES :reply-with 5)
-----
sender: laro
replyStr: (PACKAGE :SENDER MITSUI_YELLOW_PAGES :RECEIVER TARD :IN-REPLY-TO 5
MITEM (REPLY (FIDELITY_NATIONAL)))
Sending message
Sending success
Sending message
Sending success
Message String =N 1003790531314 (PACKAGE :sender laro :content (ASK-ALL ?X (IS
?X INSURER)) :receiver MITSUI_YELLOW_PAGES :reply-with 10)
-----
sender: laro
replyStr: (PACKAGE :SENDER MITSUI_YELLOW_PAGES :RECEIVER TARD :IN-REPLY-TO 10
MITEM (REPLY (STATE_FARM_ALLSTATE)))
Sending message
Sending success
Sending message
Sending success
-----
Message saved to file
Message saved to file
Message saved to file
Message saved to file
Message saved to file
Message saved to file
Message saved to file
Message saved to file
Message saved to file
Message saved to file
Message saved to file
Message saved to file
Message saved to file
Message saved to file
Message saved to file
Message saved to file
Message saved to file
Message saved to file
Message saved to file
Message saved to file
-----
old content: (ask-one ?x (insurance.monthly_rate deluxe_plus ?x))
-----
new performative: ask-one
-----
new content: (?x (insurance.monthly_rate deluxe_plus ?x))
-----
The following message has been received
sender: laro
content: (?x (insurance.monthly_rate deluxe_plus ?x))
performative: ask-one
buff[] : insurance.monthly_rate
buff[] : deluxe_plus
buff[] : ?x
The following message will be sent to other agent
(PACKAGE :sender allstate :content (REPLY 300) :receiver tar
Sending message
Sending success
Sending message
Sending success
-----
new performative: ask-one
-----
new content: (?x (and (house.address mountain_view_plaza "123 mi
" (house.city mountain_view_plaza fairfax)(house.price mountain_vie
premium title_insurance ?x)))
-----
The following message has been received
sender: laro
content: ?x (and (house.address mountain_view_plaza "123 mi
y mountain_view_plaza fairfax)(house.price mountain_view_pla
ium title_insurance ?x))
performative: ask-one
The following message will be sent to other agent
(PACKAGE :sender fidelity_national :content (REPLY 2000) :re
y-to 6)
Sending message
Sending success
Sending message
Sending success
```

JATLite Insurer
"Allstate"

JATLite
Titlecompany
"Fidelity_National"