

The Development of U-Mart Agent with U-Mart System Version 2.0



Hajime Kita
Kyoto University, Japan

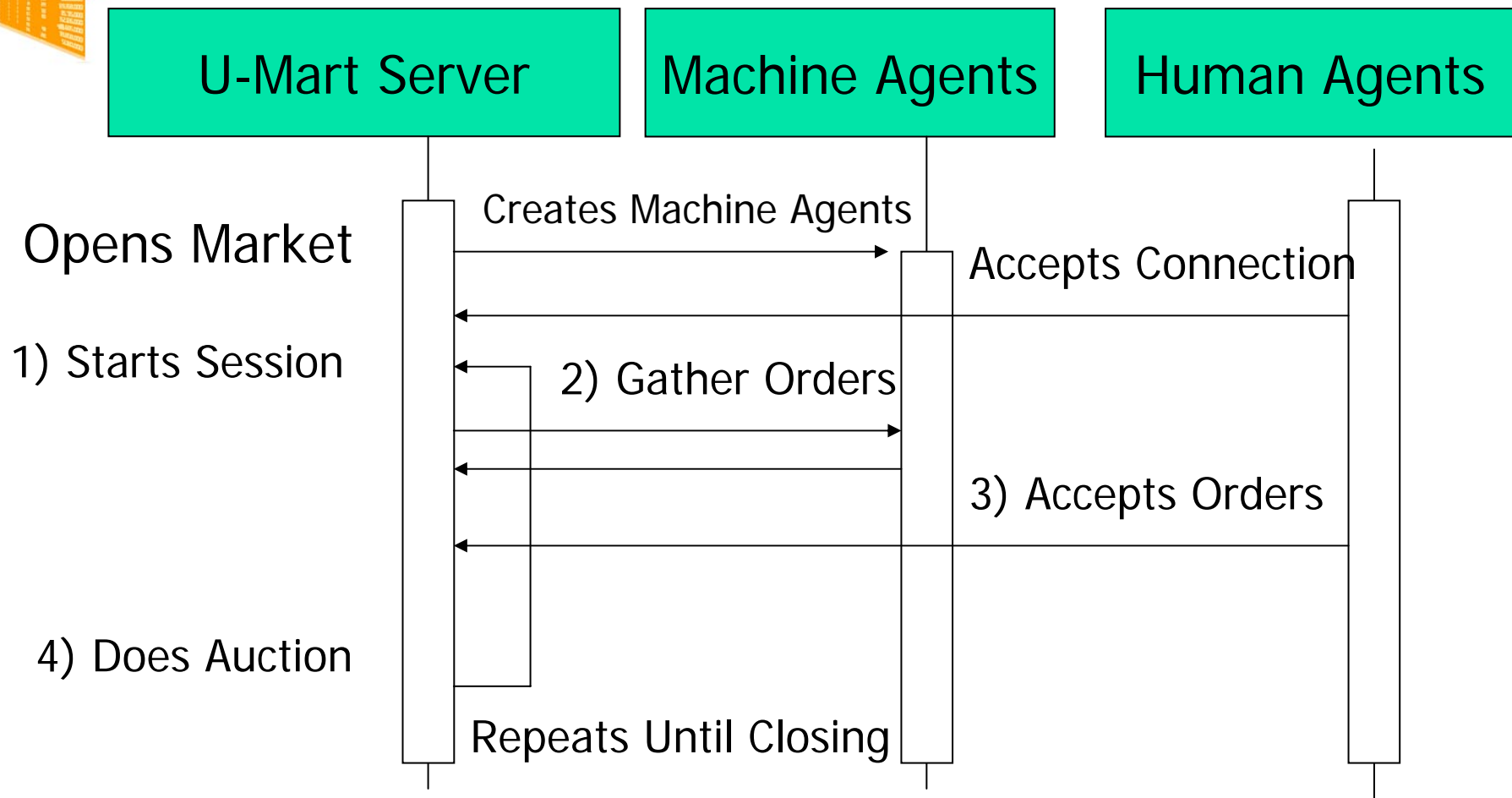


Agenda

- Agents in U-Mart System Version 2
- From Development to Operation of Agent
 - Development of Agent
 - To Compile Strategy Code
 - Preparation of Agent Definition File
 - Operation of Server
- Formal Description of Agent Strategies
- Class to Describe Agent Strategies
- Example: MySRandomStrategy.java
- Example: MyDayTradeStrategy.java



Agents in U-Mart System Version 2





Development of Agent

- To Write a Trading Strategy File in Java
- To Compile the Java Source Code into a Java class File
- To prepare Agent Definition File



To Compile Strategy Code

- Requires
 - UMartSystem
 - Java 2 Standard Development Kit (j2sdk)
- Open Command Prompt
- Move (cd) UMartSystem folder
- Compile with the following

`javac -classpath UMartSystem.jar strategy/MySRandomStrategy.java`

Full Path may needed.



Preparation of Agent Definition File

- Open ExampleForMyStrategies.csv with Excel
- Edit/Add line corresponding to your agent/strategy, and save.

Strategy Class

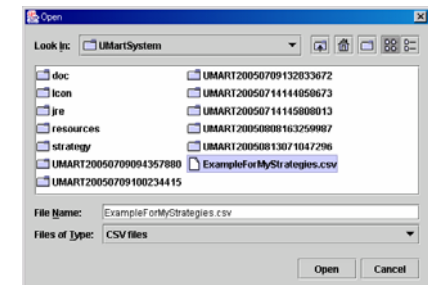
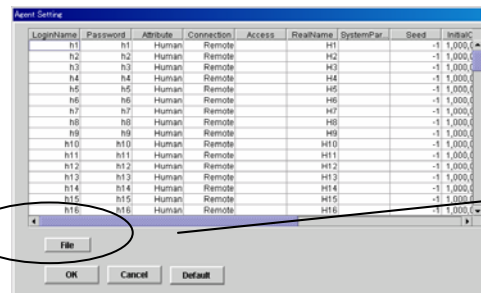
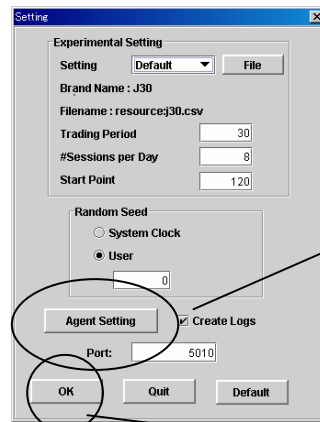
	A	B	C	D	E	F	G	H	I	J	K	L	M
	LoginName	Password	Attribute	Connection	AccessAllow	RealName	SystemParamSeed	InitialCash	TradingUnit	FeePerUnit	MarginRate		
1													
2	MySRandomS	passwd0	Machine	Local		strategy.MySRandomStrategy	WidthOfPrice=	100	1000000000	1000	0	300000	
3	MyDayTradeS	passwd1	Machine	Local		strategy.DayTradeStrategy	WidthOfPrice=	100	1000000000	1000	0	300000	
4	TrendStrategy	passwd2	Machine	Local		strategy.TrendStrategy		2	1000000000	1000	0	300000	
5	AntiTrendStr	passwd3	Machine	Local		strategy.AntiTrendStrategy		3	1000000000	1000	0	300000	
6	AntiTrendStr	passwd4	Machine	Local		strategy.AntiTrendStrategy		4	1000000000	1000	0	300000	
7	RandomStrate	passwd5	Machine	Local		strategy.RandomStrategy		5	1000000000	1000	0	300000	
8	SRandomStra	passwd6	Machine	Local		strategy.SRandomStrategy		6	1000000000	1000	0	300000	
9	SRandomStra	passwd7	Machine	Local		strategy.SRandomStrategy		7	1000000000	1000	0	300000	
10	SRandomStra	passwd8	Machine	Local		strategy.SRandomStrategy		8	1000000000	1000	0	300000	
11	RSiStrategy	passwd9	Machine	Local		strategy.RSiStrategy		9	1000000000	1000	0	300000	
12	SRsiStrategy	passwd10	Machine	Local		strategy.SRsiStrategy		10	1000000000	1000	0	300000	
						strategy.SRsiStrategy		11	1000000000	1000	0	300000	
						strategy.SRsiStrategy		12	1000000000	1000	0	300000	
						strategy.MovingAverageStrategy		13	1000000000	1000	0	300000	
						strategy.SMovingAverageStrategy		14	1000000000	1000	0	300000	

Seed for Random Numbers



Operation of Server

- Start U-Mart Server (MarketServer_en.exe)
- Specify Agent Definition File
- Start Market
- Get Result as Log Files



Start Simulation



Operation of Server

U-Mart: Market Server

File Help

Day: 4 Spot Price: 2,027 ☒ Auto Update 0 sec. Update

Session: 3 Futures Price: 2,003

Info Chart Order Book Contracts Profit Position Exchange Info STDOUT

	MemberID	Sell	Buy	TotalSell	TotalBuy	Cash	UnrealizedProfit	Margin	S
●	MMySRandomStrategy	0	73	153	174	967,888,000	-3,912,000	28,200,000	
●	MMyDayTradeStrategy	0	0	56	172	966,796,000	1,596,000	34,800,000	
●	MTrendStrategy	0	36	266	153	978,058,000	1,158,000	23,100,000	
●	MAntiTrendStrategy1	30	0	151	178	996,453,000	-2,647,000	900,000	
●	MAntiTrendStrategy2	57	0	220	326	986,230,000	930,000	14,700,000	
●	MRandomStrategy	24	0	149	116	981,742,000	-1,158,000	11,100,000	
●	MSRandomStrategy1	0	54	271	110	965,697,000	-2,203,000	32,700,000	
●	MSRandomStrategy2	0	0	267	211	984,022,000	822,000	16,800,000	
●	MSRandomStrategy3	42	0	243	117	948,836,000	-764,000	50,400,000	
●	MRsiStrategy	52	0	67	223	974,734,000	5,934,000	31,200,000	
●	MSRsiStrategy1	0	0	80	0	979,023,000	3,023,000	24,000,000	
●	MSRsiStrategy2	0	0	18	28	998,336,000	1,336,000	3,000,000	
●	MSRsiStrategy3	0	0	33	0	991,266,000	1,166,000	9,900,000	
●	MMovingAverageStrategy	0	0	34	0	989,290,000	-510,000	10,200,000	
●	MSMovingAverageStrategy1	0	0	41	35	997,760,000	-440,000	1,800,000	
●	MSMovingAverageStrategy2	0	0	16	47	990,695,000	-5,000	9,300,000	
●	MSMovingAverageStrategy3	0	0	16	37	993,645,000	-55,000	6,300,000	
●	MSFSpreadStrategy1	0	42	120	223	954,416,000	-2,084,000	43,500,000	
●	MSFSpreadStrategy2	0	0	152	128	990,421,000	-2,379,000	7,200,000	
●	MDayTradeStrategy1	0	0	44	59	995,702,000	202,000	4,500,000	
●	MDayTradeStrategy2	0	0	40	100	981,990,000	-10,000	18,000,000	

UMART20050813114135749

ファイル(E) 編集(E) 表示(V) お気に入り(A) ツール(T) ヘルプ(H)

戻る 進む 検索 フォルダ

アドレス(D) C:\Documents and Settings\kita\Desktop\UMartSystem\UMART20050813114135749 移動

ファイルとフォルダのタスク

その他

詳細

UMART20050813114135749
ファイル フォルダ
更新日時: 2005年8月13日、11:41

Member.csv
Microsoft Excel CSV ファイル
3 KB

TimeSeriesDefinitions.csv
Microsoft Excel CSV ファイル
1 KB

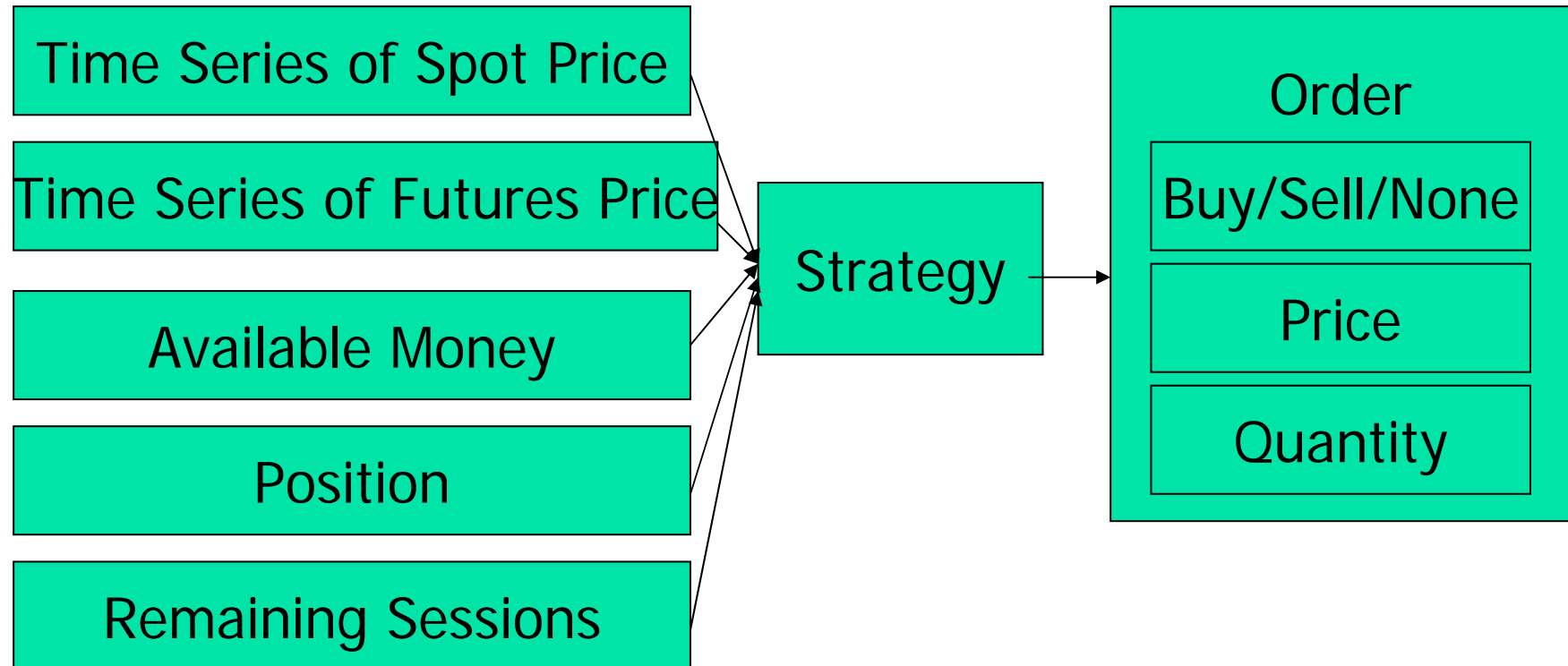
price.csv
Microsoft Excel CSV ファイル
8 KB

account board
execution order

Set 0 sec to accelerate



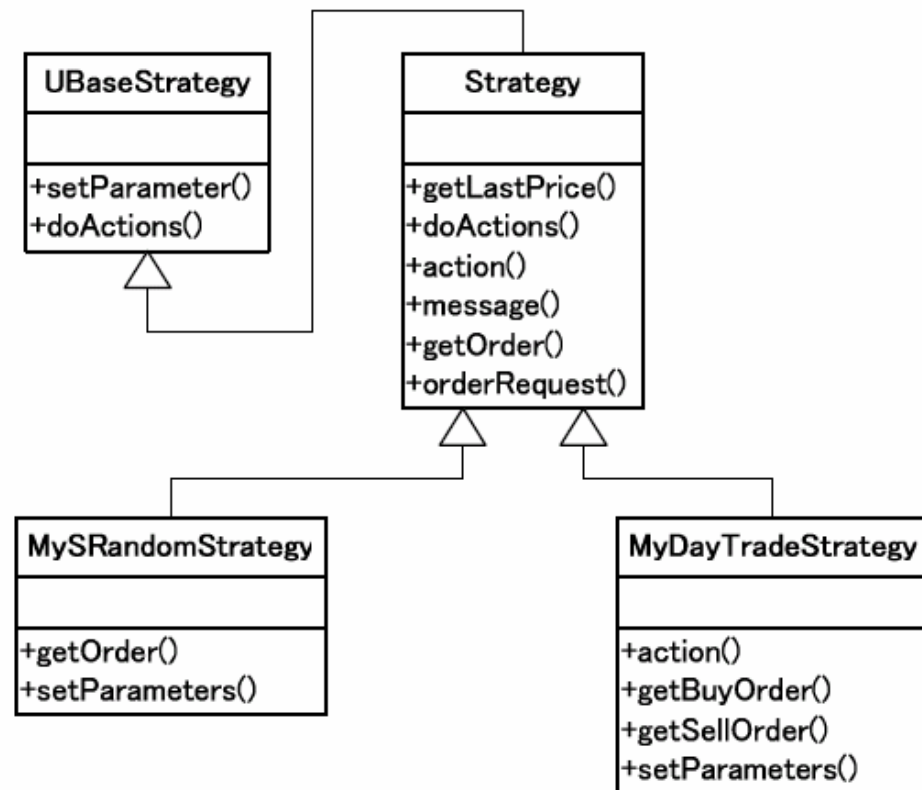
Formal Description of Agent Strategies





Class to Describe Agent Strategies

- Describe Strategy as subclass of Strategy Class





Example: MySRandomStrategy.java

- Simple Strategy that makes
 - One order in a session.
 - Decide buy/sell, price and quantity randomly.
 - Price is decided randomly around the latest spot price.
 - Implement strategy in getOrder() method.



Exmple: MyDayTradeStrategy.java

- Strategy that orders several in one sesion.
- Implement strategy by overriding action() method.