MarketCast Server

Functional Specification

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<u>Amendment History</u>

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1. General

1.1 Description and hardware requirements

MarketCast Server is a data distribution server, which provides reliable delivery of real-time data from source network to clients over unreliable or slow networks (such as Internet) using sophisticated caching and buffering (queuing) techniques. It supports Reuters Triarch and TIB/Rendezvous messaging platforms as source networks and can run in real-time, delay or recorder/playback mode. MarketCast Server can be used as delivery mechanism for Jigsaw Platform or as a stand-alone solution for any other real-time data applications.

MarketCast Server runs on following platforms:
- Sun Ultra SPARC workstation with Solaris 2.5.1 or higher;
- Microsoft Windows NT/2000;
- Hewlett Packard HP-UX version 11.x;
- Linux.

2 MarketCast Server Functional References

2.1 MarketCast Server Functionality

MarketCast Server performs following functions:

- <u>Data cache management.</u> The server creates and maintains local cache of real-time data based on requested items. It continues to monitor updates for all items in cache to keep cache data up-to-date. Various policies regarding cache management, removing unwatched items and pre-emption are implemented. Maximum size of local data cache can be configured;
- <u>Clients' management.</u> The server maintains list of currently connected clients with cross-links to local data cache to reference each client's subscription list. The server can be configured to authenticate every new connection from a client with username/password. Total number of simultaneous clients' connections as well as maximum number of items available for each client to subscribe can also be configured;
- <u>Intelligent queue.</u> For each connected client the server maintains a buffer (queue) for outgoing messages. In case of slow consumer client the data, which cannot be sent immediately, is placed in the queue for the client. Once this queue reaches its maximum size, the server switches to amalgamating mode, in which it tries to integrate new outgoing messages with the ones already in the queue. The server uses sophisticated algorithms to guarantee minimum or no information loss;
- <u>RV data record mapping.</u> For data coming from TIB/Rendezvous source network the server maps fields in RV message to internal field IDs in resulting message according to master fields dictionary file;
- <u>Items mapping.</u> If configured, the server can perform a mapping between source network-specific item codes and a standard item codes convention, providing a generic item code interface for clients' requests. The rules for items mapping is implemented using extended regular expression formulas; **(NOT YET AVAILABLE)**
- <u>Cascading.</u> The MarketCast Server can be configured to connect to another MarketCast Server rather than directly to a source network. This allows for creation of a cascade of MarketCast Servers with each one maintaining it's own local data cache and eliminating unnecessary upstream/downstream data traffic;
- <u>Failover.</u> The clients can be configured to have a list of possible connection points to several MarketCast Servers providing failover mechanism to switch between servers in case of failure;

- <u>Data permission support.</u> If data on a source network includes permission information, the server can maintain permission tables specifying what data clients are entitled to subscribe to;
- <u>Logging.</u> The server maintains platform-dependant a date- and time-stamped logs with various start-up and operational messages. Every extraordinary condition is also recorded in the server's log. Once log reaches it's maximum size, it is saved under different name and new log is created;
- <u>Delayed data.</u> Delay version of MarketCast Server (MarketDelay Server) can be configured to run with delay intervals set either for individual items or for all data and uses several delaying scenarios;
- <u>Recording/playback.</u> MarketCast Server comes with two special options for recording real-time data and re-playing it later for demo or test purposes;
- <u>HTTP tunnelling.</u> MarketCast Server supports HTTP tunnelling for exchanging messages with clients connected via firewalls. The server maintains special connection point for HTTP tunnels and wraps all messages sent through such connections with HTTP-like headers to allow them to pass firewalls checks;
- <u>Client-side API libraries.</u> MarketCast Server API libraries (dynamically- and statically-linked) are available for Windows 98/ME/NT/2000, Solaris 2.5 and higher, HP-UX 11.x and Linux.

2.2   Not-Supported Data Types

The MarketCast Server does not support ANSI page-based data.

3 Source Network Architectures

3.1   TIB/Rendezvous Source Network

The following diagram shows sample architecture with MarketCast Server connected to TIB/Rendezvous source network.
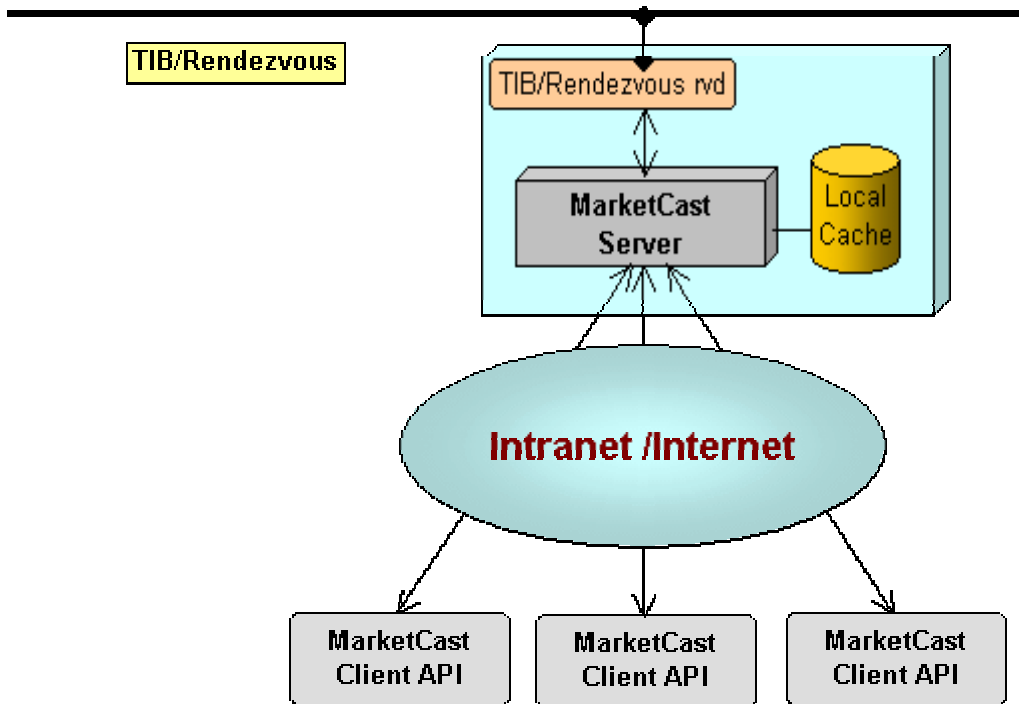
3.2   Reuters Triarch Source Network

The following diagram shows sample architecture with MarketCast Server connected to Reuters Triarch source network.
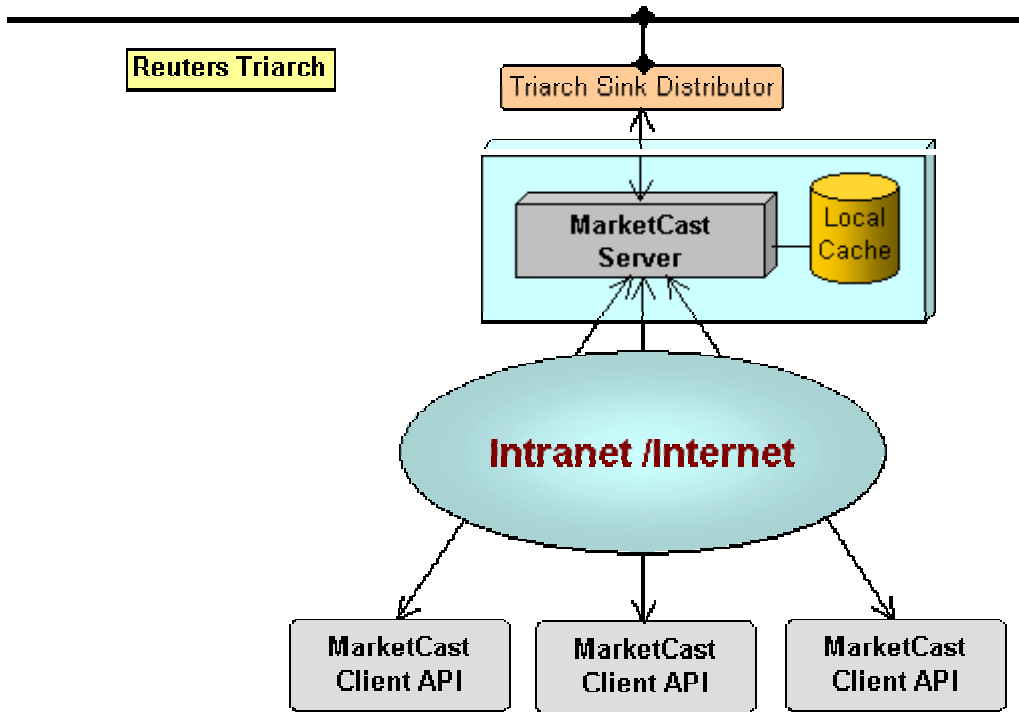
3.3   Cascade Network

The following diagram shows sample architecture with MarketCast Server connected to another MarketCast Server in Cascade network.
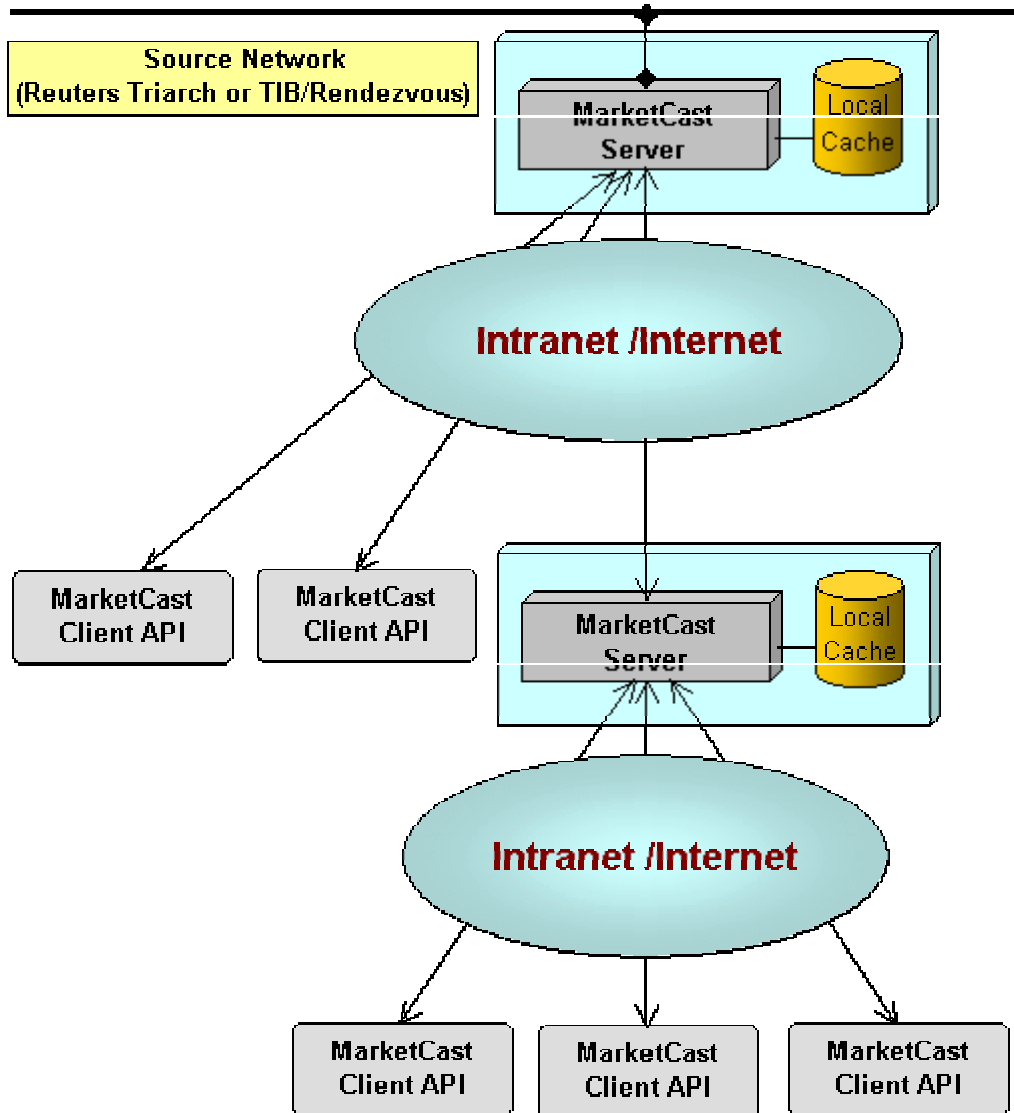
4 Installation

4.1 Microsoft Windows NT/2000

The MarketCast Server runs as a service on Microsoft Windows platforms. To install MarketCast service on Windows NT/2000 server or workstation, administrator (or user with administrator's privileges) needs to perform following steps:

1) Copy MarketCast Server executable and configuration files to the Windows System directory (e.g. "`C:\WINNT\system32`");
2) Open Command Prompt window and change directory to the Windows System directory;
3) From command prompt run MarketCast Server executable with "`/install`" switch (e.g. "`marketcast /Install`").

This will install MarketCast Server as Windows NT/2000 service and create all necessary settings with default values in Windows Registry (see 5. Configuration).
By default, the MarketCast service's Startup Type is set as Manual. To allow MarketCast Server to start up automatically during system boot, the type needs to be changed to Automatic using Windows Service Manager.

4.2 UNIX

The MarketCast Server runs as a daemon process on all supported UNIX platforms. To install MarketCast Server on UNIX workstation and configure it for automatic start-up during system boot, administrator (root) needs to perform following steps:

1) Copy MarketCast Server executable files to specially created directory (e.g. "`/usr/local/marketcast`");
2) Add following lines to start-up script file for the target UNIX platform (e.g. "`S77marketcast`" in "`/etc/rc3.d`" on Solaris):
   ```
   sleep 10
   cd <MarketCast directory>
   ./start_m_cast
   ```

To install the MarketCast Server on Sun Solaris systems, Sun's standard application packaging tools (**pkgadd**) can be used. In this case, administrator needs to perform following steps:

1) Copy MarketCast Server software package files ("`BUILD`") to a temporary directory (e.g. "`/tmp/mcast`");
2) Transfer software package to the system using standard package transfer utility (e.g. "`pkgadd –d /tmp/mcast/BUILD`")

5 Configuration

5.1 Multi-Platform Considerations

The MarketCast Server uses different configuration mechanisms depending on target platform. Parameter names are consistent across all supported platforms. The server processes all settings during start-up. Therefore any changes in settings will take effect only after MarketCast Server is re-started.

On Microsoft Windows NT/2000, the MarketCast Server uses Windows Registry settings to configure its parameters. All MarketCast specific parameters are located under key `HKEY_LOCAL_MACHINE\SOFTWARE\Orchid Technology\`**`<MarketCast service name>`**, where **`<MarketCast service name>`** is the name of the MarketCast service and can be one of the following values:

- `"MarketCast Service"` for real-time MarketCast Server connected to either Reuters Triarch network or another MarketCast Server;
- `"MarketCast RV Service"` for real-time MarketCast Server connected to TIB/Rendezvous network;
- `"MarketCast Playback Service"` for MarketCast Server running in playback mode;
- `"MarketCast Recorder Service"` for MarketCast Server running in recording mode connected to either Reuters Triarch network or another MarketCast Server;
- `"MarketDelay Service"` for MarketCast Server running as data delaying server.

On UNIX platform, the MarketCast Server uses shell environmental variables to configure its parameters. The file `"start_m_cast"` can be used to modify values of the parameters.

5.2 General Settings

Following parameters are used to configure the MarketCast Server general settings.

Parameter name	Definitions	Default value
PortNumber	TCP/IP port number used by the server to listen for new connection requests from clients.	8201
HttpPortNumber	TCP/IP port number used by the server to listen for new HTTP-tunnel connection requests from clients. If zero is set, the server will not use HTTP-tunnelling functionality.	0
AdminPortNumber	TCP/IP port number used by the server to listen for connections from MarketCast Administrator's Console.	8202

ResolveHostnames	Flag to enable/disable IP address to hostname resolution for connected clients. If set to non-zero value, the server will try to resolve IP address of each newly connected client to a hostname. This can be time-consuming operation on some systems.	0
PingInterval	Time interval in seconds used to send ping messages to clients.	30
MaxMessagesToRead	Maximum number of messages the server will read from source network in one processing cycle.	50
MaxMessagesToSend	Maximum number of messages the server will send to each client in one processing cycle.	20
ResponseThrottle	Maximum number of outstanding requests on the source network.	10
RemoveUnwatchedItems	Flag to remove items not watched by any client from local data cache. If set to 0, items will be left in data cache even after all clients unsubscribe from them.	1
MaxCacheSize	Maximum number of items stored in local data cache.	1000
MaxItemsPerUser	Maximum number of items each client can subscribe to.	300
MaxUsers	Maximum number of simultaneous clients' connections.	64
MasterFIDFile	Full path and name of the master field dictionary file.	"appendix_a"
LockedItemsFile	Full path and name of the file with locked items list.	""
EnablePermissionCheck	Flag to enable/disable permission checks and authorisation of new connection requests from clients.	1
ForceUniqueUser	Flag to enable/disable multiple connections from clients using the same logon name.	0
EnableDataPermission	Flag to enable/disable data permission checks for items subscriptions.	0
DataPermissionTable	Full path and name of the file with data permission tables.	""
AuthorisedUserGroup	Group name username must belong to for successful authorisation of a connection request.	"Marketcast Users"
RecordTypeFID	Name or ID of the field specifying data type.	259
PermissionInfoFID	Name or ID of the field specifying permission code of the data.	1
UserName	Logon name used by the server when connecting to the source network.	""
DefaultSourceName	Default service name the server will use when requesting items without service name.	"IDN_SELECTFEED"

5.3   Settings for Reuters Triarch Network

Following parameters are used to configure the MarketCast Server settings for Reuters Triarch network.

Parameter name	Definitions	Default value
SSLSinkServiceName	Sink distributor service name used when mounting the Sink channel.	"triarch_sink"

5.4   Settings TIB/Rendezvous Network

Following parameters are used to configure the MarketCast Server settings for TIB/Rendezvous network.

Parameter name	Definitions	Default value
RVService	Name of the service RV transport will communicate on.	"rendezvous"
RVNetwork	Network interface the TIB/Rendezvous daemon will use for all outbound messages from the server.	""
RVDaemon	TIB/Rendezvous daemon location and port number.	"localhost:7500"
RVKnownSourcesFile	Full path and name of file with the list of known source names for Reuters Triarch comparability.	"rv_sources"
RVPendingImageTimeout	Timeout value in seconds used by the server to wait for initial snapshot data from RVCACHE server before rejecting the requested item.	15

5.5   Settings for Playback Mode

Following parameters are only used to configure the MarketCast Server settings for playback mode.

Parameter name	Definitions	Default value
PlaybackLoop	Flag specifying whether MarketCast Playback Server, upon reaching the end of recorded data, should loop back and continue playback from the start. If set to 1 the server will play back recorded data repeatedly.	0
PlaybackDataPath	Path name of the directory where all recorded data are located.	"./DATA"

5.6   Settings for Recorder Mode

Following parameters are only used to configure the MarketCast Server settings for recording mode.

Parameter name	Definitions	Default value
PlaybackDataPath	Path name of the directory where all recorded data are to be stored.	"./DATA"
RecorderStartTime	Date/time of the start of recording	No default, must be specified in "HH:MM:SS DD/MM/YYYY" format
RecorderEndTime	Date/time of the end of recording	No default, must be specified in "HH:MM:SS DD/MM/YYYY" format

5.7   Settings for MarketDelay Server

Following parameters are only used to configure the MarketCast Server settings for data delaying mode.

Parameter name	Definitions	Default value
AggregateDelayedData	Flag defining delaying scenario. If set to 1, updates will be aggregated and sent as delayed snapshot messages. If set to 0, updates will be delayed without combining them.	1
DelayInterval	Default delay interval in seconds used by the server to delay data for items without individually configured delay.	1200
UpdateInterval	Time interval in seconds used by the server to send aggregated delayed data.	300

6 MarketCast Server Operational Design

6.1   Running MarketCast Server in Debug Mode

Normally, the MarketCast Server runs either as Windows service on Windows NT/2000 platform or as a daemon on supported UNIX platforms. However, it is possible to start the MarketCast Server as a Windows console application in special Debug mode for test purposes. When MarketCast Server executable is invoked with command line switch "`/Debug`", it will run inside the console it was started from and display various debugging and test information in it. The MarketCast Server will use any logging facilities in Debug mode.

6.2   Platform-Dependant Logging

The MarketCast server uses different logging facilities depending on target platform.

On Windows NT/2000, the MarketCast Server uses standard Windows EventLog mechanism, logging messages to Application Log on local machine with different Log Types. Standard Windows Event Viewer application can be used to view and remove the MarketCast Server's logs. When Application Log reaches its maximum size, the MarketCast Server dumps the log content to "`mc_event.bak`" file and reset Application Log.

On supported UNIX platforms, the MarketCast Server uses standard UNIX syslog mechanism. Four syslog priority levels (INFO, WARNING, NOTICE, ERR) are supported.

On all supported platforms it is also possible to configure the MarketCast Server to use flat ASCII files for logging. In this case "`MarketCast.sys.log`" file name is used for log messages. When size of the log file reaches 1MB, it is copied to "`MarketCast.sys.log.old`" file and original file is reset.

6.3   Cache Management

The MarketCast Server maintains local cache with up-to-date items' data. Normally, item gets added to the cache when at least one client has subscribed to it. The MarketCast Server keeps data in the cache up-to-date by continuously monitoring real-time updates for all cached items. When client subscribes to an item, the server checks whether such item is already in the cache and if so delivers item's data from there,

reducing upstream request/response traffic. If requested item is not in the cache, the server sends the request to the source network upstream and adds the item to the cache.

When client un-subscribes from an item, the server checks if there are other clients currently subscribed to the item and if not marks the item as "unwatched". Decision on whether to remove unwatched items from the cache or leave them updating in the cache will depend on the value of `RemoveUnwatchedItems` flag (see 5.2 General Settings).

It is also possible to configure the MarketCast Server to request certain "frequently-watched" items automatically during its start-up and lock them in the cache permanently. This is a convenient feature if there is a known list of items most of the MarketCast Server's clients will always (or often) subscribe to. Locked items list is also the only way to configure delay intervals on item-per-item basis for MarketDelay Server. On start-up the MarketCast Server looks for the file specified by `LockedItemsFile` parameter and retrieves list of items. It then requests all items from the list and adds them to the cache marked as "locked". Locked items remain in the cache until server's shutdown, regardless of the value of `RemoveUnwatchedItems` flag (see 5.2 General Settings).

The local cache size is controlled by `MaxCacheSize` parameter. When the cache reaches its maximum size, the server applies special pre-emption algorithm to find and replace items with lowest priority. The server sends corresponding message to all clients subscribed to the pre-empted item, closes and removes it from the cache.

Content of the cache is also controlled on per-client basis with `MaxItemsPerUser` parameter. This parameter defines maximum number of items a client can subscribe to simultaneously. If number of subscribed items reaches the maximum, the server applies pre-emption algorithm (just as in case of controlling local cache size) to find and replace items with lowest priority. The server sends corresponding message to the client and removes the pre-empted item from the client's subscription list. However, the item will be removed from the cache only if it becomes "unwatched" and `RemoveUnwatchedItems` flag is set. If the item is marked as "locked" it will remain in cache.

6.4   Clients Authorisation and Data Permission

The MarketCast Server can be configured to perform authorisation checks on new connection requests from clients. Every client must follow special authorisation procedure to be able to connect to the server. As a part of it, clients must provide username and password information to the server. The server authenticates clients using platform-dependant users databases.

On Windows NT/2000 platform it uses standard Windows user account information either on local machine or on domain. On supported UNIX platform, standard users database is used (e.g. "`/etc/passwd`" for local user accounts information or NIS/NIS+ maps for network configurations). To be able to connect to the MarketCast Server with clients' authorisation enabled, a client must provide username that is registered in appropriate user database with correct password. Furthermore, the username used for authorisation must belong to a special user group (set with `AuthorisedUserGroup` parameter).

The `EnablePermissionCheck` parameter is used to enable/disable clients' connection authorisation. When the authorisation is disabled, any client can connect and request data from MarketCast Server.

When data on source network includes permission information, the MarketCast Server can perform data permission checks for new items' subscriptions. The `PermissionInfoFID` parameter specifies a name or an ID of the field in data messages that is used to provide permission code for the data. When client subscribes to an item, the server accepts the request and waits for initial item's data to arrive. It then checks whether the client is entitled to the data permission code of the item. If so, the data is sent to the client, otherwise, special close message is sent back. Information about clients' entitlements for permission codes is located in the file specified by `DataPermissionTable` parameter (see 7.3 Permissions File Format (Permission Table)).

The `EnableDataPermission` parameter is used to enable/disable data permission by clients. When data permission is disabled, clients are entitled to subscribe to any data and the only items' check performed is on maximum number of simultaneously opened items (see 5.2 General Settings).

6.5   Data Delaying

The MarketCast Server running in delay mode (MarketDelay Server) can use various scenarios for delaying data. If `AggregateDelayedData` flag is set, the server will combine several updates for an item in one message and, after applying corresponding delay, send it to the clients as a snap update. Time interval used for such update messages is configured by `UpdateInterval` parameter.

If `AggregateDelayedData` flag is not set, the server will simply delay every update for an item, keeping original time intervals between updates.

Delay intervals for items can be configured either on per-item basis or by default value. Delay intervals for individual items are configured via locked items file. For items not

specified in the locked items file, the default delay interval is used as defined by `DelayInterval` parameter (see 7.2 Locked Items File Format).

6.6   Data Recording and Playback

The MarketCast Server can run in recording mode to record all data requested through it to the set of files. This recorded data can be used for playback later.

The MarketCast Server in recording mode will start recording data on date/time specified by `RecorderStartTime` parameter ("HH:MM:SS DD/MM/YYYY" format is used). Similarly, the MarketCast Server will stop recording on date/time specified by RecorderEndTime parameter (same "HH:MM:SS DD/MM/YYYY" format is used). All recorded data are placed in a directory specified by `PlaybackDataPath` parameter. Timestamps of all data messages are also recorded to provide "realistic timing" for update messages during playback.

The MarketCast Server in playback mode will re-play recorded data located in the directory specified by `PlaybackDataPath` parameter. If `PlaybackLoop` flag is set, the MarketCast Server upon reaching the end of recorded data will rewind it and start playing back again from the beginning. If `PlaybackLoop` flag is not set, the server will stop playback when it reached the end of recorded data. In this case it will not exit automatically, but simply cease sending any data messages. However, the server will continue process new clients connections and system messages as usual.

The MarketCast Server in recording/playback mode uses following files for recorded data (located in directory specified by `PlaybackDataPath` parameter):

ric_map.dat	Information for mapping item codes into recorded data files;
time_stamps.dat	Time stamps for "realistic timing" playback;
<service_name>/pbNNN.dat	Recorded data. Each file corresponds to one item with **NNN** as a unique ID and **<service_name>** as a subdirectory corresponding to original source of the items.

7 MarketCast Server File Formats

7.1   Master Fields Dictionary File Format

Master fields dictionary file lists all fields the MarketCast Server will process when relaying data messages from source network to the clients. For each field data type, size and relations to other fields are also specified in the file.

The master fields dictionary file has following format (lines with '!' in first position are discarded as comments):

```
! This is a comment
…
field_N  field_name_N  field_id_N  shift_to_field_N  field_type_N  field_size_N
…
```

Where:

field_N	the field's internal name;
field_name_N	name of the field in messages from source network (in case of TIB/Rendezvous it can be either RV field name or id; it is used to identify source field for fields mapping);
field_id_N	ID to be used for the field in all data messages to the clients (in case of Reuters Triarch it can be standard Reuters FID);
shift_to_field_N	internal name (**field_N**) of the field to which current value of this field will be shifted every time it's being updated (i.e. similar to Reuters Ripples fields);
field_type_N	type of the field's values (e.g. integer, string, time, date, etc);
field_size_N	size (in bytes) of the field when converted to a string

The MarketCast Server running on TIB/Rendezvous network uses master fields dictionary file as a mapping table for converting RV messages to MarketCast data messages. For each field in original RV message the server tries to find a field entry in the file with value of **field_name_N** that matches the RV message field name or ID. If such entry is found, the value of **field_id_N** is used as ID for the field in newly converted message; its value is converted to a string and checked against the field's type (**field_type_N**) and size (**field_size_N**). If resulting string value of the field exceeds the size, the value gets truncated.

7.2   Locked Items File Format

Locked items file is used to specify list of items that the MarketCast Server requests automatically during start-up and locks in data cache. Items marked as "locked" remain in the cache regardless of the value of `RemoveUnwatchedItems` flag. They are also assigned highest priority and therefore never get pre-empted in case data cache reaches its maximum size (see 6.3 Cache Management).

The MarketCast Server also uses this file in data delaying mode (as MarketDelay Server) to specify delay intervals on per-item basis (see 6.5 Data Delaying).

The locked items file has following format (lines with '#' in first position are discarded as comments):

```
# This is a comment
[source_1]
        item_1          delay_1
        item_2          delay_2
        …
        item_N          delay_N
…
[source_X]
        …
```

Where:

source_X   service name on the source network followed by the group of items;

item_N   code of item to be locked in the server's cache;

delay_N   interval in seconds for the item's update messages to be delayed by.

All items listed under [**source_X**] section will be requested using this service name. It is possible to omit [**source_X**] sections completely and specify only list of items with or without delay intervals. In that case, value of `SSLServiceName` parameter will be used as default service name to request locked items (see 5.3 Settings for Reuters Triarch Network).

Only MarketCast Server running in data delaying mode uses value of **delay_N**. If the value is omitted, `DelayInterval` parameter is used as delay interval for the item (see 5.7 Settings for MarketDelay Server).

Please refer to Appendix A – Locked Items File Example.

7.3 Permissions File Format (Permission Table)

The MarketCast Server uses the permission file when data permission is enabled. The permission table stored in the file specifies a list of data permission codes entitled for each client. If client's username is not in the table, the server will reject all of the client's subscription requests.

The permission file has following format:

```
user_name_1 = permission_code_1, permission_code_2, … permission_code_N
…
user_name_M = permission_code_1, permission_code_2, … permission_code_N
```

Where:

user_name_M	username of the client (as provided in connection request). The value *"*"* has special meaning ("<u>default user</u>"), the permission codes configured for such **user_name** will be assigned to the clients whose usernames are not in this table;
permission_code_N	permission code of data, the client is entitled to subscribe to. Instead of list of permission codes, the special value *"*"* can be specified to entitle the client to subscribe to all data ("<u>open access</u>").

Please refer to <u>Appendix B – Permission File Example</u>.

7.4 Items Mapping File Format

[Items mapping functionality is not currently implemented. To be defined]

8 MarketCast Server Administrator

8.1 Administrator's Console

The MarketCast Server comes with a special Administrator's Console. The Administrator's Console is a Windows dialog-based application, which provides number of tools for real-time monitoring and administrating the MarketCast Server.

The following picture shows typical content of the MarketCast Administrator's Console.

8.2 Connecting to MarketCast Server

The Administrator's Console must be connected to a MarketCast Server. Administrator specifies host name or IP address and administrative port number of MarketCast Server to connect the Console to. Once connection is established the Console will display logon dialog. Administrator must enter name and password of a user account, which has administrator's privileges on the machine where the MarketCast Server is running.

8.3   Monitoring MarketCast Server

The connected Administrator's Console displays various statistical information about current state of MarketCast Server in real-time.

Following data can be monitored with the Administrator's Console:
1) Server start-up date and time;
2) Total messages received from the source network;
3) Number of connected clients;
4) Number of items in data cache;
5) Total number of items pre-empted from the cache;
6) List of currently connected clients with following information for each client:
    a) User name of the client;
    b) IP address or host name the client has connected from;
    c) Date/time of connection;
    d) Current state of outgoing messages queue;
    e) Current and peak baud rates;
    f) Total number of item subscription requests;
    g) Total number of item un-subscription requests;
    h) Number of items currently subscribed by the client;
    i) Total number of items pre-empted for the client;
    j) Total number of messages (including system messages) sent to the client;
    k) Total number of messages dropped or amalgamated due to slow processing by the client;
7) List of items currently in data cache with following information for each item:
    a) Item name;
    b) Source name for the item;
    c) Date/time of adding the item to the cache;
    d) Current status of item's data (can be LIVE, STALE, OPENING);
    e) Page flag (set to 1 if item's data is in page format);
    f) Total number of data messages (updates) received for the item from the source network;
    g) Delay interval in seconds for the item used by MarketDelay Server;
    h) Number of clients currently subscribed to the item.

The Console can also display a list of items for selected client or a list of clients for selected item.

Similar to standard Windows Explorer, clients list and content of data cache can be viewed in four different styles: large icons, small icons, list or with details.

Items in data cache window are displayed using following icons:

 LIVE item not locked in cache;

 LIVE item locked in cache;

 STALE item not locked in cache;

 STALE item locked in cache.

8.4   Managing Clients and Data Cache Items

The MarketCast Administrator's Console can be used to manage clients' connections as well as the content of data cache.

Administrator can forcefully disconnect selected clients from the MarketCast Server ("Delete user(s)" button) or remove selected items from the data cache ("Delete item(s)" button). Note that this is the only way to remove locked items from the cache of MarketCast Server.

It is also possible to dump current content of the data cache to a file on local disk. If "Dump cache items…" is selected from the Console's system menu, it will display a standard Windows Save As dialog, prompting administrator to specify destination folder and file name to dump the cache to. The resulting file will have on each line the source name and item code separated by TAB character.

Appendix A – Locked Items File Example

```
#-------------------------------------------------------------
# MarketCast Server
# Locked Items File
# With delay information (in seconds)
#-------------------------------------------------------------

# IDN items to be locked and delayed by MarketDelay Server (20 min)
[IDN_SELECTFEED]
        6501.T  1200
        6758.T  1200
        1803.T  1200
        1301.T  1200
        4045.T  1200
        4005.T  1200
        1804.T  1200
        5713.T  1200
        4061.T  1200
        6976.T  1200
        1805.T  1200
        8319.T  1200
        4063.T  1200
        1332.T  1200
        1806.T  1200
        4010.T  1200
        4151.T  1200
        5714.T  1200
        4208.T  1200
        6991.T  1200
        1837.T  1200
        8322.T  1200
        4272.T  1200
        1601.T  1200
        1861.T  1200
        1801.T  1200
        1802.T  1200
        4021.T  1200
        4041.T  1200
        4042.T  1200
        5715.T  1200
        7003.T  1200
        8332.T  1200
        5801.T  1200
        7004.T  1200
```

Appendix B – Permission File Example

```
#-------------------------------------------------------------
# MarketCast Server
# Permission Table File
#-------------------------------------------------------------
# Username = list of permission codes

# Following users have open access (can subscribe to everything)
ad01    =       *
ad02    =       *

# Following users have restricted access
mc01    =       1,5,24,1024,2034,2321
mc02    =       1,2,5,1024,2034,2321
mc03    =       1,6,24,1024,2034
mc04    =       1,2,,1024,2034,2321

# Following is setting for all users not mentioned in this file (defaults)
*       =       1,2,5
```