FIX Project Implementations – "Food for Thought"
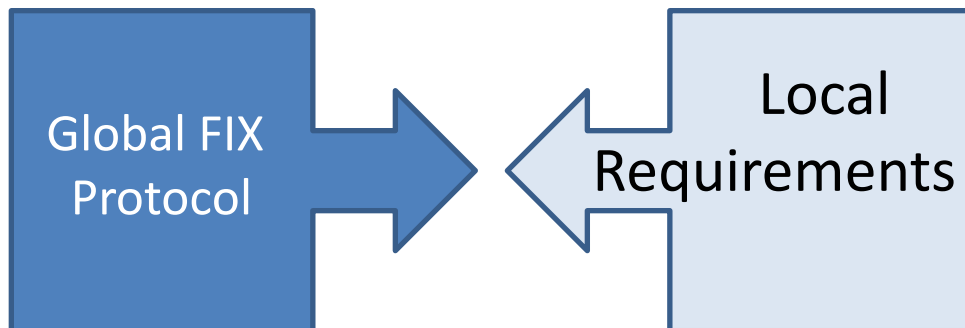
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Part I
Myths and Implementation Examples

FIX Protocol – Global vs Local

Assumption

Global FIX Protocol → Local Requirements

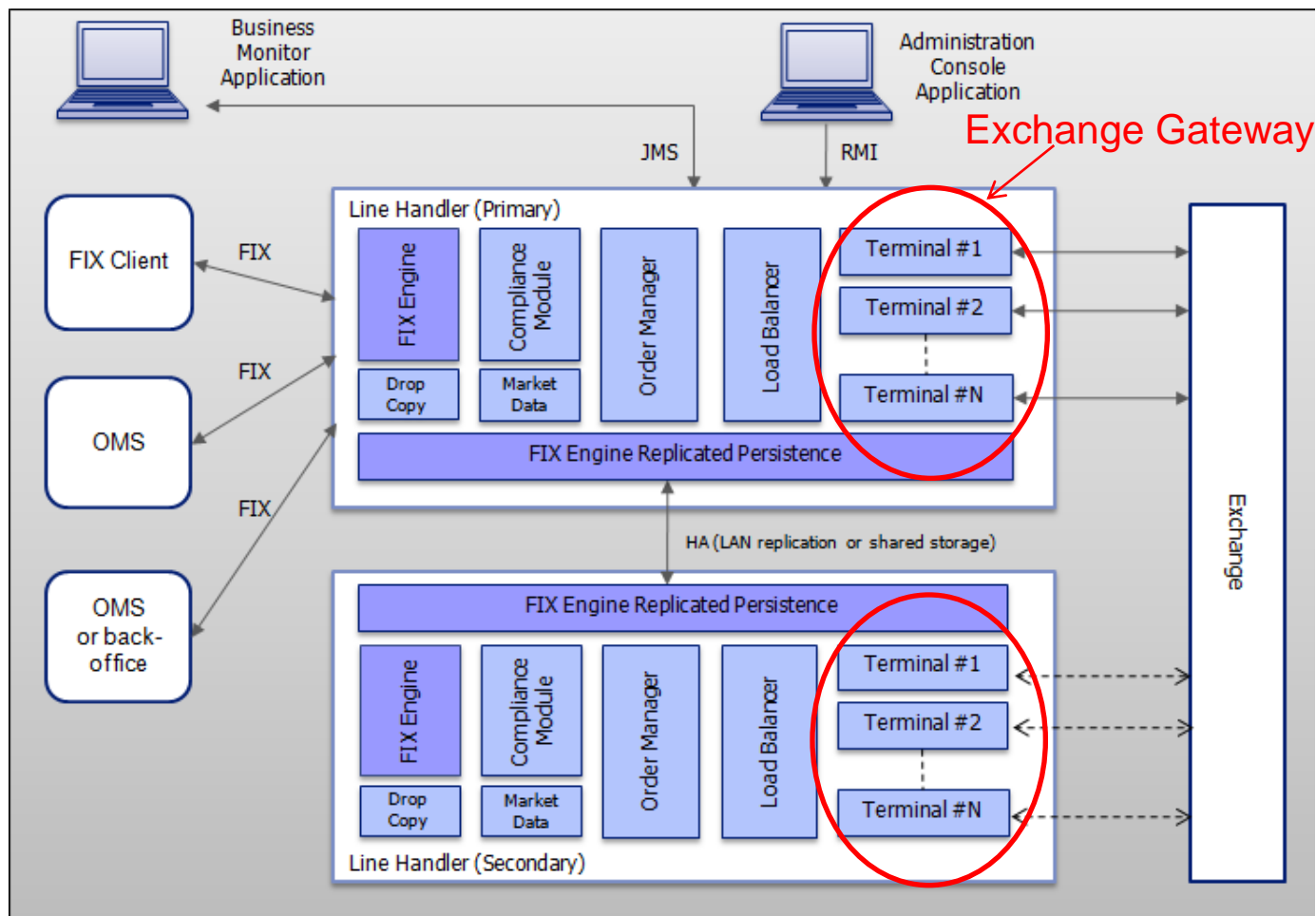**Reality**

Global

Local

Business Case –

Alpha – NYSE's

TSE Arrowhead FIX Gateway

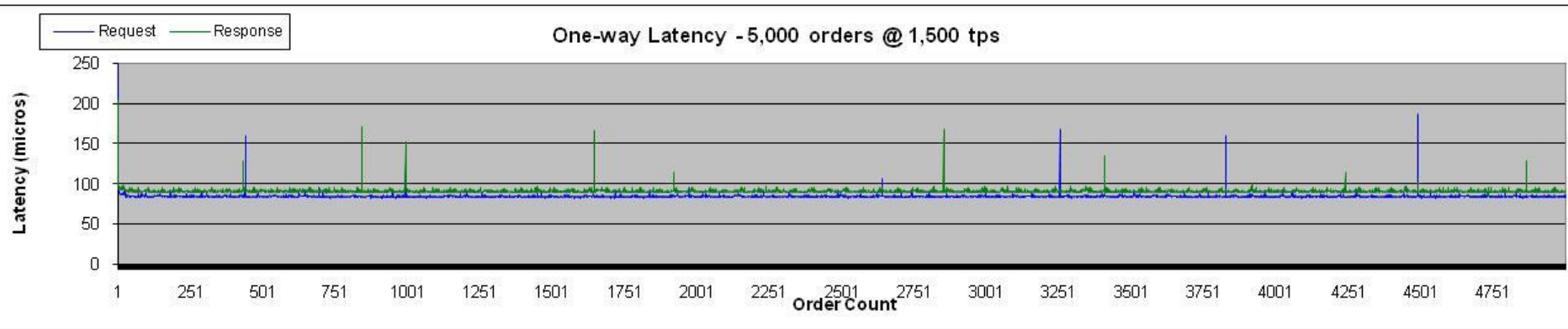**4 custom tags only** for all order/execution interaction with the local exchange

FIX Latency to Exchange Gateways

Myth: FIX is slow

FIX Latency to Exchange GWs – (i) Architecture

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FIX Latency to Exchange GWs – (ii) Example

One-way Latency - 5,000 orders @ 1,500 tps

**Exchanges force FIX Gateways
to be slow by not allowing straight access
to the matching engine.**

However, even going through
an exchange GW FIX can be fast,
yet, never fastest.
What is fastest then?
Do we need to be fastest?

Latency (micros)	
1500tps	
Request	Response
84	91
84	91
85	93
86	94
82	84
251	205
3.73	3.23

Hardware utilized -
Server   BL460c
CPU   X5570 / 2.93GHz
Memory   2G x6
Non HA mode

Note - each test case: 15 Terminals, 5,000 accepted orders @ 1,000 orders/second throughput

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Two Other Examples of Applied FIX Solutions

Supporting one FIX Version is not enough

Business growth = counterparty growth = growth of FIX dialects

Requirement – system flexibility to accept/process such differences

Solution – FIX hubs to absorb differences / FIX versions

Different flavors of exchange order conditions do not always match FIX tags

Requirement – more generic FIX tags

Solution – FIX version 5.0 introduced many generic tags to describe complex conditions – Will it become Asian standard? (eg, SGX now implemented FIX Version 5.0 SP2)

Reality Check FIX in a Local Market

FIX Engines is simply part of your infrastructure

everybody should have

Should everybody have a FIX engine, really?

Example Japan:

User Base:

| Global Players | Domestic FX | Domestic Commodity | Domestic Equity |

Part II
FIX Landscape in Korea

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