



FIX Orchestra Technical Standard Proposal

Version 1.0 Technical Standard

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V0.1

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For Global Technical Committee Governance Internal Use Only

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Document History

Revision	Date	Author	Revision Comments
V0.1	Feb. 3, 2021	Hanno Klein, GTC	Initial draft

1 Introduction

FIX Orchestra was conceived as **machine readable rules of engagement** between counterparties. As such, it is a standard for exchange of metadata about the behavior of FIX applications. Orchestra is intended to cut time to onboard counterparties and improve accuracy of implementations.

Orchestra does not change the FIX Protocol itself in any way, nor does it obsolete existing FIX engines or tools.

1.1 Roadmap

The working group believes that Orchestra version 1.0 Technical Standard is ready for production use. No changes have been made to the Technical Specification of the Draft Standard other than to correct lexical errors. Minor changes have been made to the interfaces schemas to increase its quality (see Section 2.2 *Technical Requirements*).

1.2 Authors

Name	Affiliation	Contact	Role
Don Mendelson	Silver Flash LLC	donmendelson@silverflash.net	Working group co-chair
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2 Requirements

2.1 Business Requirements

No new business requirements have been recognized since the Draft Standard was published.

2.2 Technical Requirements

This section describes enhancements or changes to the Orchestra standard since the Draft Standard was published.

2.2.1 Provide ContentType attribute to interfaces schema

This change was documented under GitHub issue #100 and affected the XSD file for interfaces. It lacked the ContentType attribute.

2.2.2 Prevent duplicate interface names in interfaces schema

This change was documented under GitHub issue #101 and affected the XSD file for interfaces. It enforces the uniqueness of interface names.

3 Issues and Discussion Points

None

4 References

Reference	Version	Relevance	Normative
None			

5 Relevant and Related Standards

Related Standard	Version	Reference location	Relationship	Normative
Dublin Core XML Schemas	2008-02-11	http://dublincore.org/schemas/xmls/	Dependency	Yes
XML Schema for FIX	2016		Technical guide	Yes
XML Schema	2012	https://www.w3.org/TR/xmlschema11-1/	Dependency	Yes
Namespaces	2006	https://www.w3.org/TR/xml-names11/	Dependency	Yes

6 Intellectual Property Disclosure

Related Intellection Property	Type of IP (copyright, patent)	IP Owner	Relationship to proposed standard

7 Definitions

Term	Definition
Pedigree	The recorded history of an artifact
Provenance	A record of ownership of an artifact

8 FIX Orchestra

8.1 Project milestones

Since Orchestra has many facets, features have been delivered in several release candidates rather than attempting a big-bang approach.

8.1.1 Version 1.0 Technical Standard deliverables

These artifacts will be delivered as v1.0 Technical Standard:

- The technical specification is a separate document “FIX Orchestra Technical Specification”. The document will be displayed in the Tech/Specs section of FIX Trading Community website (<https://www.fixtrading.org/standards/fix-orchestra-online/>) as well as in GitHub project [FIXTradingCommunity/fix-orchestra-spec](https://github.com/FIXTradingCommunity/fix-orchestra-spec).

These resources have been published in GitHub project [FIXTradingCommunity/fix-orchestra](https://github.com/FIXTradingCommunity/fix-orchestra):

- XML schema (XSD) for repository of message definitions and workflow plus documentation of the schema
- XML schema (XSD) for interfaces and session configuration plus documentation of the schema
- Grammar and implementation of the Score DSL
- Scripts to populate Orchestra from the Unified Repository and vice versa (message structure only)
- Example Orchestra files
- Demonstration projects:
 - Documentation generator
 - QuickFIX data dictionary and code generators (<https://github.com/FIXTradingCommunity/fix-orchestra-quickfix>)
 - QuickFIX session configuration (<https://github.com/FIXTradingCommunity/fix-orchestra-quickfix>)
 - Test generator

8.2 Plan for EP production

In addition to standard development, a plan will be created to migrate the building of Extension Packs from Unified Repository to Orchestra. In addition to modernizing build facilities, this plan will need to account for the tools that consume Repository, including FIXimate, FIXML schema generation, and so forth.

Appendix A - Usage Examples

These example Orchestra files are posted in GitHub.

Example order entry file developed by MilleniumIT

`fix-orchestra/repository/src/test/resources/examples/`

Sample interface file

`https://github.com/FIXTradingCommunity/fix-orchestra/blob/master/interfaces/src/test/resources/SampleInterfaces.xml`

A non-FIX exchange API interpreted in Orchestra

<https://github.com/FIXTradingCommunity/orchestrations/tree/master/NYSE%20Pillar>

Appendix B – Compliance Strategy

The first level of compliance will be provided by existing XML tools that verify conformity of a file to its schema. A test is provided to validate that isolated DSL expressions conform to the grammar. However, a comprehensive compliance test has not yet been developed.