FIX Generation 6 – A Version to end all Versions!

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Topics

- FIX Legacy

- FIX Latest

- FIX Orchestra

- FIX Online

FIX Legacy

- **FIX Generations prior to FIX 4**
  - FIX 2.7 released in July 1994 represents the first official specification
  - FIX 3.0 released in September 1995 represents a set of enhancements to 2.7

- **FIX Generation 4**
  - FIX 4.0 released in January 1996 introduced major changes to the session layer to support recovery, introduced components and extended the year format from 2 to 4 characters ("Y2K ready")
  - Significant semantic changes from FIX 4.2 to FIX 4.3, addition of market data and TCR messages
  - FIX 4.4 released in April 2003 is the last version of this generation which moved FIX into asset classes beyond equities and supported exchanges and clearinghouses in addition to buy-side/sell-side

- **FIX Generation 5**
  - FIX 5.0 released in December 2006 introduced the transport independence framework to separate the FIX Session Protocol from the FIX Application Protocol
  - Significant extensions for exchanges, clearinghouses and regulators to support market structure and various functionalities not relevant to buy-side/sell-side
  - FIX Application Layer retained the traditional version moniker "FIX x.y" and FIX Session Layer was provided with its own version moniker "FIXT x.y"
  - FIX 5.0 SP2 introduced the concept of Extension Packs in April 2009 for incremental additions of functionality which already covered all major remaining gaps of the application layer
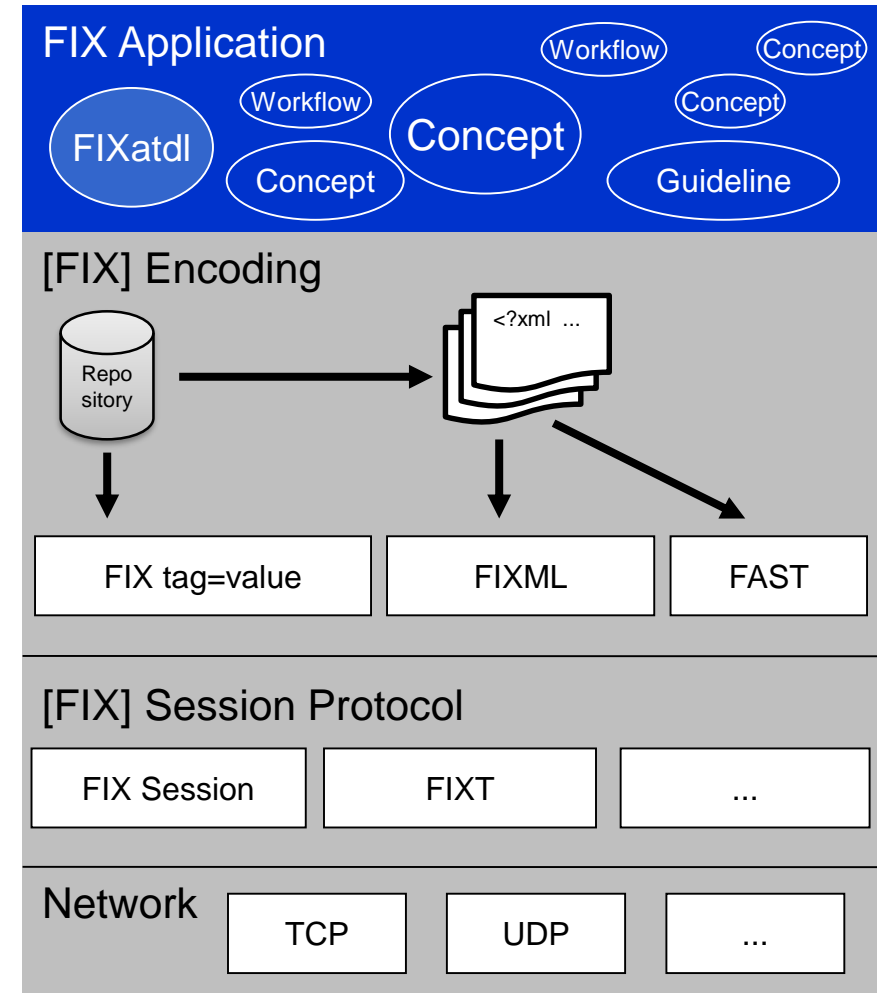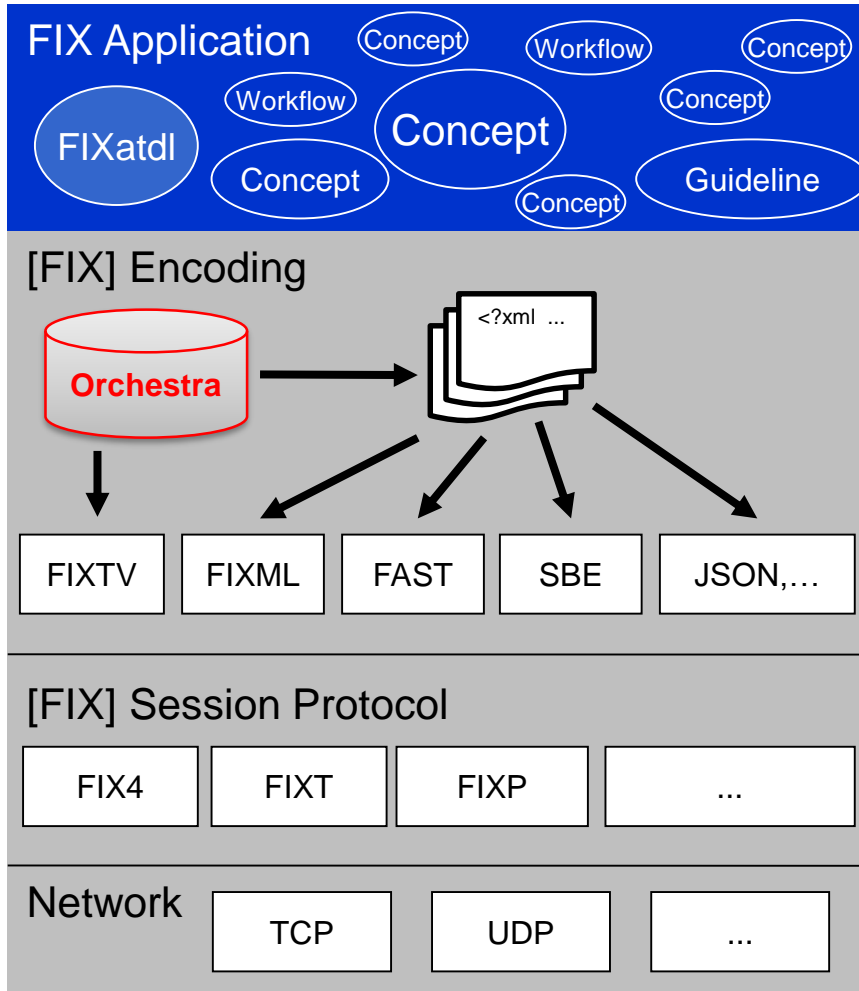
1994

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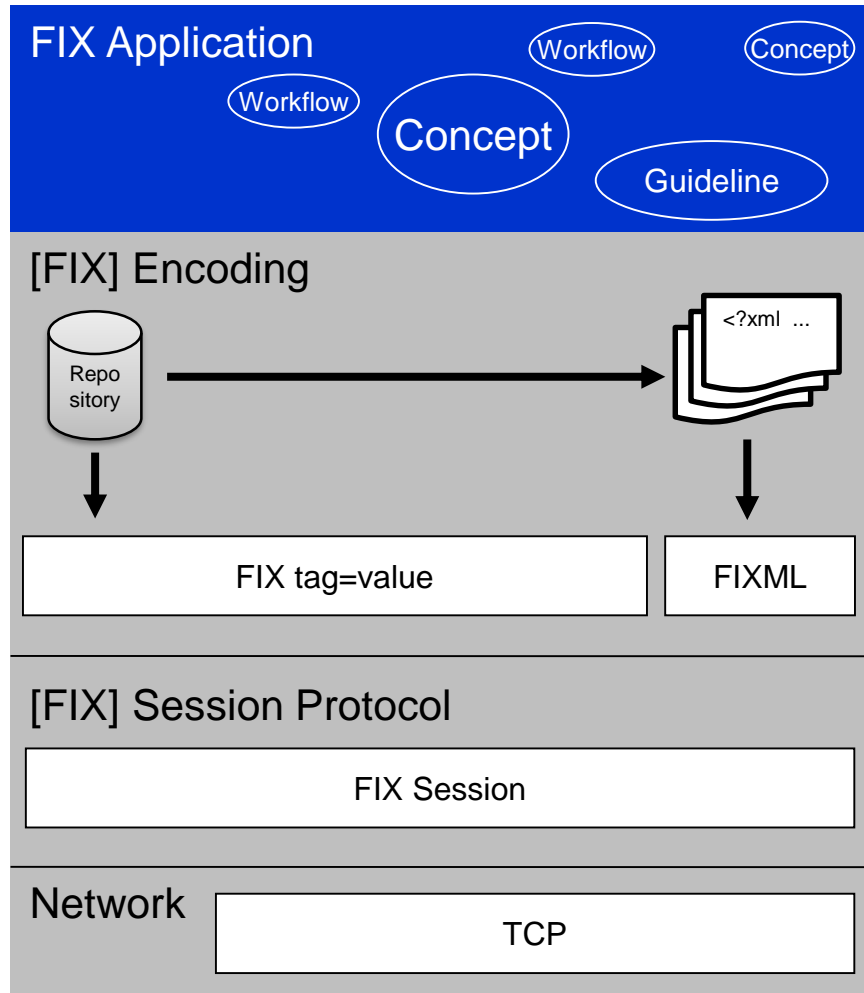
Generation 6 (2018)

- FIX Application Layer (semantics) consists of concepts, guidelines and workflows for the business functionality of the financial industry
- Normative vs non-normative specification

- FIX Encoding Layer includes ASCII (e.g. FIXML) and binary (e.g. SBE) representations of FIX semantics
- FIX Orchestra as master source for all encodings, containing the FIX Repository and workflow semantics

- FIX Session Layer defines the protocol for inter-party communication
- FIX and non-FIX transports (e.g. AMQP, MQSeries)

- FIX does not provide a physical network and uses existing industry standards for the actual transport

FIX Latest

- Counterparties have typically agreed on a single FIX version as part of their Rules of Engagement defining the specific messages, fields and valid values supported between them. In terms of FIX compliance, this excluded the usage of any elements from higher versions, including the usage of new enumerations for existing fields.

- Regulatory requirements have forced the FIX community to include new elements from higher versions, i.e. the notion of a "FIX version" no longer applies to the vast majority of FIX connections out there. It often comes down to the value used in BeginString(8) which needed to identify a FIX version prior to FIX 5.0. It was then replaced with the identification of the session protocol, i.e. "FIXT.1.1". The usage of elements from higher versions became an official FIX policy.

- FIX has effectively abandoned the concept of large versions in favour of small, so-called Extension Packs (EPs) with the introduction of FIX 5.0 Service Pack 2 in April 2009. EPs were already introduced as a concept with the base version of FIX 5.0 in December 2006 but only published as integral part of the next large version. EPs have been published immediately and separately since EP98.

- The term "FIX Latest" has been introduced to identify the most recent official set of messages, fields and valid values (see http://fiximate.fixtrading.org/latestEP). The Rules of Engagement between two counterparties then define the actual subset used.

- FIX Latest is updated with every Extension Pack officially approved by the GTC after public review. The last approved extension is EP240 *Average Pricing and Markup Extensions* submitted by the CME.

FIX Orchestra

- Definition of a Technical Standard for machine-readable Rules of Engagement
  (https://www.fixtrading.org/standards/fix-orchestra/)

- Increased level of automation and testing for FIX interfaces

- Support for version interoperability, i.e. automated translation of concepts that have changed across versions in the early days of FIX, mainly from FIX 4.2 to FIX 4.3 (e.g. ExecBroker ➔ Parties component).

- Multiple Github demonstration projects (https://github.com/FIXTradingCommunity/fix-orchestra):
  - Orchestra files published in GitHub for NYSE Pillar API, FIX 4.2, 4.4 and 5.0SP2
  - Orchestra demo projects: documentation generator (with diagrams), acceptance test generator (Cucumber)
  - Orchestra + QuickFIX integrations for data dictionary and code generation, message validation and population
  - Orchestra POC for JSON schema generation and web API
  - XML diff/merge utility for future extension pack management with Orchestra
  - DSL implementation for Orchestra (Java and C++)

- FIX Orchestra used internally by FIX to implement Extension Packs and create artefacts, e.g. FIXimate, schema files

FIX Online

- FIX has moved to a new website in August 2017, using open source software and tools as much as possible. The state-of-the-art technology (including single sign-on capability) allows us to make a step-change in terms of how the GTC can present information about the FIX Family of Standards to the FIX community. Current online capabilities comprise:
  - FIXimate (includes extensive search capabilities)
  - FIXwiki (includes feedback capability)

- One of the main objectives for Generation 6 is the transition from the static specification and EP documents (PDF, Word), available for download today, to (interactive) web pages
  - Volumes 1-7 of the FIX specification have not been adapted since FIX 5.0 SP2 which is the last official FIX version. ASBUILT documents of the EPs contain the business requirements and guideline information for extensions
  - Volumes 1-7 contain multiple types of information (Technical Standards, normative specification, non-normative guidelines and usage information) that needs to be separated
  - Once a baseline has been established for the normative specification, we can add normative material from the EPs
  - We would like to have an online feedback mechanism for the FIX community to report issues or errors in the normative specification

- Additional documents (guidelines, recommended practices) are non-normative and compiled by FIX working groups. The objective is to enable these groups to provide online content directly and in a collaborative manner.

- Tools developed with FIX Orchestra for FIX-internal automation could also be made available to members as an online service through the new website.