

# Nasdaq TotalViewITCH

## Background

- Binary data format called *TotalViewITCH*
- Stream of messages:
  - System messages
  - Order messages
  - Trade messages
  - Etc.
- Real-time (nanoseconds timestamped) market view

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## Specification

- Messages consists of a type (character) followed by a sequence of bytes

System Message	<div><div>type</div><div>'S'</div></div>	<div><div>timestamp</div><div>uint32</div></div>	<div><div>event</div><div>char</div></div>				
Add Message	<div><div>type</div><div>'A'</div></div>	<div><div>timestamp</div><div>uint32</div></div>	<div><div>refno</div><div>uint64</div></div>	<div><div>side</div><div>char</div></div>	<div><div>shares</div><div>uint32</div></div>	<div><div>ticker</div><div>string[8]</div></div>	<div><div>price</div><div>uint32</div></div>
Delete Message	<div><div>type</div><div>'D'</div></div>	<div><div>timestamp</div><div>uint32</div></div>	<div><div>refno</div><div>uint64</div></div>				
Execute Message	<div><div>type</div><div>'E'</div></div>	<div><div>timestamp</div><div>uint32</div></div>	<div><div>refno</div><div>uint64</div></div>	<div><div>shares</div><div>uint32</div></div>			