Time-Sensitive Networking (TSN) Profiles (Selection and Use of TSN tools)

Audio Video Bridging [802.1BA]	Fronthaul [802.1CM/de]	Industrial Automation [IEC/IEEE 60802]	Automotive In-Vehicle [P802.1DG]	Aerospace Onboard [IEEE P802.1DP / SAE AS6675]

TSN Components
(Tools of the TSN toolset)

Time synchronization:
Timing and Synchronization [802.1AS-2020]
(a profile of IEEE 1588)
Hot Standby [P802.1ASdm]
YANG [P802.1ASdn]
Inclusive Terminology [P802.1ASdr]
Support for half-duplex [P802.1ASds]

Bounded low latency:
Credit Based Shaper [802.1Qav]
Frame Preemption [802.1Qbu & 802.3br]
Scheduled Traffic [802.1Qbv]
Cyclic Queuing and Forwarding [802.1Qch]
Asynchronous Traffic Shaping [802.1Qcr]
Shaper Parameter Settings [P802.1Qdq]
QoS Provision [P802.1DC]
Cut-Through Forwarding [P802.1DU]
Enhancements to CQF [P802.1Qdv]
Note: A 'P' in front of '802.1' indicates an ongoing Project.

High availability / Ultra reliability:
Frame Replication and Elimination [802.1CB]
Path Control and Reservation [802.1Qca]
Per-Stream Filtering and Policing [802.1Qci]
Hot Standby [P802.1ASdm]

Dedicated resources & API:
Stream Reservation Protocol [802.1Qat]
Link-local Registration Protocol [802.1CS]
TSN Configuration [802.1Qcc]
Foundational Bridge YANG [802.1Qcp]
YANG for CFM [802.1Qcx]
YANG for 802.1Qbv/Qbu/Qci [802.1Qcw]
YANG for CBS [P802.1Qdx]
YANG for MSTP [P802.1Qdy]
YANG for LLDP [802.1ABcu]
YANG for LAG [P802.1AXdz]
YANG & MIB for FRER [802.1CBcv]
Extended Stream Identification [802.1CBdb]
LLDPv2 for Multiframe Data Units [802.1ABdh]
Resource Allocation Protocol [P802.1Qdd]
TSN Configuration Enhancements [P802.1Qdj]
Multicast and Local Address Assignment [P802.1CQ]

Synchronization

Reliability

Latency

Resource Management

Zero congestion loss = Bounded latency

More on TSN standards and ongoing projects at: https://www.ieee802.org/1/tsn

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