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	Automotive	Consumer	Professional A/V	Industrial
Number of Traffic Classes	**2**	**2**	**2**	**2**
How many AVB traffic classes are required? (only A or only B or A&B)	Class A only if only a single class else Class A & B. Consensus: class A is required, B is allowed. We should include B to enable WiFi, and we should look at how to set the parameter to set the Class B latency up. The delay for class B has to be determined (based on # of ports, framesize etc.). Synchronized presentation in Class B increases buffering requirements. Can we quantify Class B buffer requirements?			
Class reservable management required	**no**	**no**	**yes**	**yes**
Is the ability to change/manage the association of an SR class to its frame Priority required?	Shall not be used in automotive			
Default Class A limit	**such that combination of A & B don't exceed 75%.**	**such that B gets 20ms worst case latency (7 hop)**	**such that B gets 20ms worst case latency (7 hop)**	**such that B gets 20ms worst case latency (7 hop)**
What is the maximum limit of bandwidth allocated to Class A traffic?	If class A only is required, 75%, if class B comes into play, we need to define a ClassA:Class B Max ratio (e.g. 70% max(A):50% max(B)->both max numbers). Total can not exceed 75%			
Ethernet link rate	**100 Mbps min**	**100 Mbps min**	**100 Mbps min**	**100 Mbps min**
Minimum supported Ethernet link rate	Consensus: Must be 100MBit min & full duplex			
Reservation switchover time (typical worst-case configuration)	**tbd**	**100ms**	**20ms**	**20ms**
When using Typical Worst-Case Configuration, the time required to tear-down and build-up a reservation	Clarification: How long does it take to tear down a connection and build it up again? Consensus: we don't have a number yet. Don brought up the 500 ms iFrame time as a number, but there are concerns that this is too long. Unclear what the implications on the hardware are, but the implications are obviously significant (we think). 125ms is another datapoint. This value is the typical worst case			
Typical worst-case configuration	**tbd**	**7 ethernet hops, or 2 wifi hops plus 2 ethernet hops, or 4 ethernet hops plus one MoCA hop**		**64 ethernet hops**
The most pessimistic network topology on which we base all other parameters	tbd - Unless there is a technical reason to limit to less than 7 hops, we should not arbitrarily limit the maximum			
Typical worst-case number of streams		**3 HD + 5 SD + 4 audio**	**HD video: 100-200 Uncompressed, Live Perf:, Theme park:, Auditorium:, Church:, Audio studio:**	
Maximum bandwidth and count of the typical worst-case stream	Remark: that is the maximum of # of streams: SRP has to control all streams. Alex Busch / BMW Group assumes 25 simultaneous streams is the maximum for passenger cars. (assuming that 7.1 is carried in one stream)			
Multiple talker/stream	**no**	**no**	**yes**	**no**
Can multiple talkers source content to a single StreamID?	Not needed			
Reservation modification	**no**	**yes**	**no**	**yes**
Does application support dynamic bandwidth switching or must peak bandwidth be reserved?	Consensus: not required Remark: If the video encoder can guarantee a fixed maximum band width, even while FFW and FRW. And: AVB cannot deliver it today anyway			
Buffered repeater detection	**yes**	**yes, 100m ethernet max**	**same for pro audio, no for studio**	**yes**
Does profile have the ability to use PTP to detect non-802.1AS compliant buffered repeaters?	Yes. If ethernet connection is exposed for user-connection, will it be AVB-capable?			
SNMP assumed	**yes**	**no**	**yes**	**yes**
Does a given profile need to support SNMP?	yes (but is not free, you need IP) or equivalent functionality			
Talker pruning capability required	**no**	**no**	**yes**	**no**
Do switches stop sending messages down ports where a destination port doesn't reside?	Not needed. Might have usage to limit some services at some ports			
Expected number of ports on a bridge	**3 to 8**	**5 to 8**	**24 or more**	**5 to 8**
What is the typical worst-case port count on a switch in this profile?	Three to eight. Fan in issue: more processing power needed. And if the # of ports increases, the maximum possible frame size decreases for a particular latency requirement. Consensus: max of 8 ports required.			
Daisy-chaining expected	**yes**	**maybe**	**yes for live perf**	**yes**
Will daisy-chaining be used in this profile?	Yes (but not only DC)			
Grandmaster capability	**dedicated grandmaster(s)**	**talker only rq**	**dedicated grandmaster(s)**	**dedicated grandmaster(s)**
Can profile pre-define primary/secondary 802.1AS Grandmasters?	Proposed: One GM, one backup GM. A dedicated grandmaster (a device that is always in the car) is required to avoid a selection process. Then we could either prioritize the grandmaster if the master-grandmaster is not available or start the selection process or a mixture of both (e.g. a backup grandmaster and, if this GM is also not available, we start a automatic selection). This would lead to a fast behaviour when Device one performs a reset. Add separate profile item to sepcify accelerated start-up			
Switching time between grandmasters	**1s**			
The amount of time to switch between grandmasters	As soon as possible with proposed maximum of 1 second. Do we need any notification for the custumer in this case? For example, a gong signal to let him know that the first GM failed? Prefer to predefine primary/secondary/etc. fail-over course of action. In automotive, no visible/audible artifacts is preferred however don't want to lose (e.g.) backup camera if radio is faulty			
Synchronization accuracy	**tbd**	**1us**	**1us**	**1us**
The necessary amount of 802.1AS accuracy over the maximum network diameter?	1 uS proposed but final number to be based on alignment accuracies currently specified in automotive			
End station jitter/wander (Probably doesn't belong in .1BA)	**Application specific i.e. audio and video have different requirements. These are seemingly an application/product specific issues. Not part of this profile.**	**consumer audio**	**HD-SDI**	**motion controller**

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Clock initialization time		2 seconds	500ms	500ms
Is this media clock? We don't know what this means. Define the term				
Clock reconfiguration time	?	???	??	??
We don't know what this means. Define the term				
Rapid Spanning tree	?	???	20ms	20ms
Rapid Spanning Tree reconfiguration time.	We also need to specify the switching time between two streams. In automotive, the potential exists for redundant topologies. Seems like an optional requirement			
IGMP/MMRP proxy	no	desirable/maybe required	maybe desirable	no
Define the term				
IEEE 802.1AS synch interval	Consensus: rate tbd	maximum for the link		same??
Define the term				
IEEE 802.1AS startup synch interval	tbd	same or TBD	same or TBD	same or TBD
Do we accelerate sync message rate during start up ?	Consensus: maybe to speed initialization. Must define "startup" length, amount of accelerated sync messages, etc			
Spanning Tree cost changes	Consensus: no	AS and Qat/av both or separately	AS and Qat/av separately	AS and Qat/av separately
Define the term				
Separate Spanning Tree for IEEE 802.1AS	OK	no (AS does BMC just to select GM)	OK	OK
We don't know what this means. Define the term				
Stream address auto-assignment	yes	probably	yes	no
Is support for MAAP required?	This will support aftermarket introduction of CE gear			
1722 support	yes		yes	
Does automotive profile support IEEE 1722	There must be a transport protocol to guarantee interoperability			
Time to establish the physical link from power off. (Probably doesn't belong in .1BA)	MOST needs 300 mS. It does not belong in this spec. It is a lot shorter than Gbit Ethernet. Auto neg has to be turned off and EEE is on.			