

ENAP AP 20200628: Comments on Draft ETSI EN 302 890-2 V2.1.1 (2020-03)
Intelligent Transport Systems (ITS);
Facilities Layer function;
Part 2: Position and Time management (PoTi);
Release 2
ITS WG1 Application Requirements and Services
(DEN/ITS-00182)

NSO	Clause/ Sub-Clause	Paragraph Figure/ Table	Type of comment (Technical⁽¹⁾ or Non- Technical)	COMMENTS	Proposed change	OBSERVATIONS on each comment submitted
NO01	General	Sections 1-6	Non- Technical	General: This specification is very much needed.		
NO02	General	Section 7	Non- Technical	The position technology is not sufficiently described to be implemented by an independent developer. More details are needed.	Remove section 7 and annex A and publish with sections 1-6.	
NO03	5.3	Figure 3	Technical	The figure does not cover the procedures described in 7.3	Update figure.	
NO04	7.1	Paragraph 3	Technical	"the following augmentation service families". There is four bullets points in the list. But only first two can be considered "augmentation". The other two is either assisted (A-GPS) or stand-alone positioning technologies with considerably less accuracy than required for C-ITS.	Remove last two bullets (Cellular based) and LTE-base. Or change the statement introducing the bullet list.	

NO05	7.1	Para 3 Bullet 1	Technical	The text in the bullet list mentions PPP. RTCM messages 10x7 only contains Pseudoranges, PhaseRanges, PhaseRangeRate, and CNR. This is sufficient for D-GNSS/RTK but not for PPP. SSR are described in RTCM 10402.1, this document is not listed in 2.1.	Clarify if PPP is covered by this specification.	
NO06	7.1	Para 9	Non-technical	Check spelling of "Wi-Fi" vs "WiFi"	Use Wi-Fi throughout the document.	
NO07	7.2.1	Para 1	Technical	How does the described technology support "jitter-free handover"?	Describe what is meant by jitter-free and how the proposed technology support this.	
NO08	7.2.3	Para 1	Technical	"ITS-S's" on line two. Is this the R-ITS-S's or vehicle units?	Clarify.	
NO09	7.2.3	General	Technical	The section would be much easier to read if R-ITS-S functions was described separately from V-ITS-S functions.	Rewrite to clarify.	
NO10	7.2.3	Para 4	Technical	Restarting the GNSS positioning function. We assume this is describing a procedure in the V-ITS-S. If the positioning function is reset (assuming this removes all old state information), how will this avoid position jitter?	These details should be left open for implementations.	
NO11	7.2.3	Fig 30	Non-technical	Figure is not referenced in the text.	Figure should be referenced.	
NO12	7.2.3	Fig 30	Technical	Is the text at the right RSU correct? Should it be R-ITS-S A and R-ITS-S B, at the left and right RSU symbol, respectively?	Consider figure update.	

NO13	7.3.1	General	Technical	It would be very useful with a sequence diagram showing the message exchange.	Please consider showing the message exchange.	
NO14	7.3.1	Bullet 3	Technical	"zero length unicast data frames". How can a frame have zero length?	Rewrite.	
NO15	7.3.1	Bullet 3	Technical	What is meant by "unicast". Is this a GeoNetworking unicast frame?	Clarify	
NO16	7.3.1	Bullet 4	Technical	Are the ranging probes sent in the actual SAM message? Are they sent on the channel specified by the SAM message?	Rewrite: e.g.: These ranging probe frames are transmitted on the service channel specified in the SAM message	
NO17	7.3.1	Fig 31	Technical	"Ranges" is very little specific. GNSS is all about ranges. The blue box should be more specific.	E.g: "Ranges from probes"	
NO18	7.3.2.1	Bullet 2	Technical	The IEEE registry shows the AID as "Cohda Wireless". What is the connection between this specification and Cohda Wireless?	Update the AID with a company-neutral registration.	
NO19	7.3.2.1	General	Technical	The actual ASN.1 type/filed names should be use to avoid unambiguity. E.g: 3D Location, service channel, MAC address	Use accurate identifiers.	
NO20	7.3.2.1	Note 2	Technical	"inaccuracy can lead to ranging errors". The range estimation is not affected by errors in the announced location of the R-ITS-S. However, the estimated position will be affected.	Rewrite.	
NO21	7.3.2.2	General	Technical	"other means". What does "other" relate to?	Clarify	

NO22	7.3.2.2	General	Technical	The section should use the proper names from the ASN.1 grammar. I.e. ITSRangingSAMAppData	Use more formal language.	
NO23	7.3.2.2	General	Technical	The section should describe how a ITSRangingSAMAppData value is encoded into binary format to be stored into the SAMapplicationData. It may be JSON, XML, PER/U, OER etc.	Clarify	
NO24	7.3.2.2	Table 7	Technical	What is the use case for calculating the mounting(?) height of the R-ITS-S? The height of the antenna is already known from the 3D location in the SAM.	Clarify	
NO25	7.3.2.2	Table 8	Technical	The table use the term "Short InterFrame Space".	Explain the term and its use.	
NO26	7.3.2.2	Table 9	Technical	What is the purpose of RoadAngles?	Explain the term and its use.	
NO27	7.3.2.2	Last para	Non-technical	The actual ASN.1 data type names should be used.	Use the actual ASN.1 data type names.	
NO28	7.3.3	Para 1	Technical	"unicast zero length Data frame" The data frame needs much more detailed description. GeoNetworking? "Zero length"	Clarify	
NO29	7.3.3	Para 1	Technical	Unicast and ACK. Is this a MAC-level procedure below the Network&Transport Layer? This is not in the scope of figure 3.	Clarify	

NO30	7.3.3	Para 1		<p>What QoS and priority properties should be used for the probes?</p> <p>Is there a Communication Profiles for this? Ref 7.3.2.2, second paragraph for the SAM.</p>	Clarify	
NO31	7.3.3	Para 1		<p>Use of unicast and ACK. Has the author of the document examined the impact of the "stop and wait" unicast/ack procedure on the general performance of the GeoNetworking subsystem?</p>	Please consider whether change is required.	
NO32	7.3.3	Para 1		<p>How are the ACK frames secured? Has it been examined how the protocol can be spoofed by a malicious IEEE 802.11 devices sending false ACKs or delayed ACKs?</p>	Please consider whether change is required.	

NO33	7.3.3	General		<p>A section on security is missing.</p> <p>How does the author relate to the fact that a R-ITS-S may send out any application-specific SAM as long as an ITS-AID is defined if the AT certificate contains the ITS-AID for SAM. This means that if the R-ITS-S has a certificate that allows SAM, and today its purpose is to send out SAM/RangingService, in the future the same R-ITS-S may send out other SAMs with the same certificate. How does this align with the European ITS security policy? Currently, there may not be an obvious problem with this approach, but in general, it means that SA has its own security policy (or lack of), whereas CA/DEN etc has very strict security with well-defined SSP.</p>	Please discuss and consider whether change is required.	
NO34	7.3.4	Para 1		<p>20 Hz probe rate. What is the effect of the performance of the GeoNetworking network if a large number of vehicles all send probes at 20 Hz (each 50 ms)?</p>	Please discuss and consider whether change is required.	
NO35	Annex A1			<p>The comments in the ASN.1 module (about the origin of the types Heading and Altitude) are redundant as this is clear from the IMPORTS statement.</p>	Remove redundant comments.	

⁽¹⁾**Technical Comment:** a comment which proposes a technical change in an ETSI deliverable. A technical change is one which, implicitly or explicitly, adds, removes or modifies provisions of the deliverable.

NOTE: Technical changes can result in modified behavior of equipment or systems designed to be conformant to that deliverable.