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Title: **JVET AHG report: Ultra-low latency and packet loss resilience (AHG18)**

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Abstract

This document summarizes the activities of AHG18 on ultra-low latency and packet loss resilience between the 39th meeting (Daejeon, KR, 26 June –04 July 2025) and 40th meeting (Geneva, , 03 – 1 October 2025).

Mandates

The AHG was established in the 37th meeting with the following mandates:

Investigate and identify test conditions, evaluation criteria and evaluation methodology, supporting a set of end-to-end latency targets in a range of 25-100 ms.

Investigate creation of practical simulation software based on VTM, including network transmission aspects, and conduct performance evaluation.

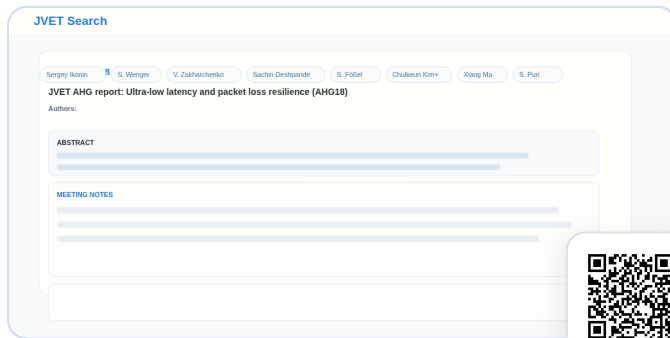
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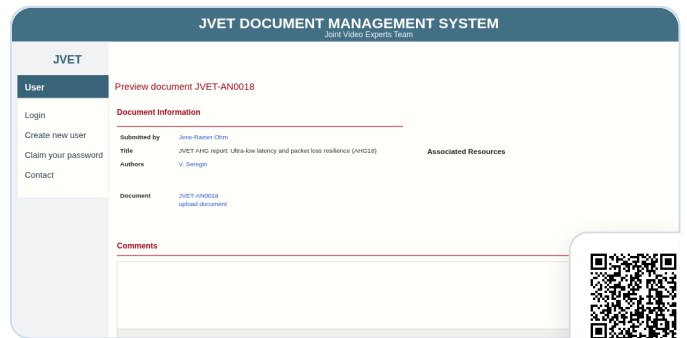
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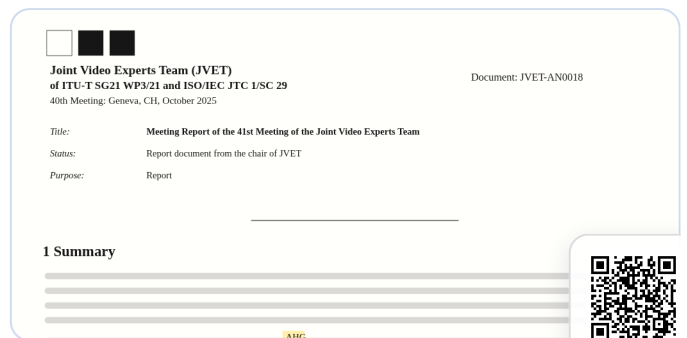
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MEETING NOTES

external meeting notes

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MEETING NOTES

[JVET-AN0018](#) JVET AHG report: Ultra-low latency and packet loss resilience (AHG18) [S. Ikonin, S. Wenger, V. Zakharchenko (co-chairs), S. Deshpande, S. Fößel, C. Kim, X. Ma, S. Puri, J. Ström (vice-chairs)]

1. Activities

The regular JVET e-mail reflector was used for discussions (jvet@lists.rwth-aachen.de). Few organizational e-mails were sent to reflector.

Teleconference

The teleconference was held on August 21st with 27 participants attending.

The following topics were discussed:

- JVET-AN0046: On test conditions for ultra-low latency and packet loss resilience with full QP range
 - Network bandwidth point selection automation script
 - LDP/LDB simulations in full QP range
 - Spatial Scalability
- AHG18 software, MRs status
 - MR2: Full VTM
 - MR3: GDR fix
- JVET-AN0045: Codec software for ultra-low latency and packet loss resilience (related to JVET-AM0218)
 - Software overview
 - Transmission priority model

The meeting minutes are available in [JVET-AN0049](#).

Simulation software

Adoption of last JVET meeting (JVET-AM0203, full VTM support) merged to ‘ull-master’ branch: https://vcgit.hhi.fraunhofer.de/jvet-ahg-ull/VVCSoftware_VTM/-/tree/ull-master. JVET-AM0195 (GDR) is cross-check pending.

1. Related contributions

A total of 12 contributions are identified relating to the mandates of AHG18. They are listed below. Some contributions also relate to the work of AHG12.

Report		
JVET-AN0018	JVET AHG report: Ultra-low latency and packet loss resilience (AHG18)	S. Ikonin, S. Wenger, V. Zakharchenko (co-chairs), S. Deshpande, S. Fößel, C.

		Kim, X. Ma, S. Puri, J. Ström (vice-chairs)
JVET-AN0049	AHG18: Teleconference on ultra-low latency and packet loss resilience	S. Ikonin , S. Wenger , V. Zakharchenko (co-chairs), S. Deshpande, J. Ström, X. Ma, C. Kim, S. Puri, S. Fösel (vice-chairs)
Test condition and evaluation methodology proposals		
JVET-AN0046	AHG18: On test conditions for ultra-low latency and packet loss resilience with full QP range	S. Ikonin , I. Gribushin , V. Khamidullin , B. Shevchenko , E. Alshina (Huawei)
JVET-AN0079	AHG18: Proposed methodology and test conditions for ultra-low latency and packet loss resilience performance evaluation	S. Ikonin , I. Gribushin , X. Ma , E. Alshina (Huawei), S. Deshpande (Sharp)
JVET-AN0089	AHG12/AHG18: On GDR test condition for video compression beyond VVC	T. Chujoh , Y. Kidani , K. Kawamura (KDDI)
Other proposals		
JVET-AN0045	AHG18: Codec software for ultra-low latency and packet loss resilience	S. Ikonin , V. Khamidullin , K. Malyshev , I. Gribushin , X. Ma , E. Alshina (Huawei)
JVET-AN0080	AHG18: CfE response in additional functionality on ultra-low latency and packet loss resilience	S. Ikonin , V. Khamidullin , I. Gribushin , M. Sychev , K. Malyshev , A. Dzugaev , A. Bovsha , X. Ma , E. Alshina (Huawei)
JVET-AN0081	AHG18: Software fixes for robust decoding in unicast scenario	K. Malyshev , V. Khamidullin , M. Sychev , S. Ikonin , E. Alshina (Huawei)
JVET-AN0204	AHG18: Request on inclusion ultra-low latency and packet loss resilience category into CfP	S. Ikonin , X. Ma , E. Alshina (Huawei), S. Wenger (Tencent)
Crosscheck		
JVET-AN0082	AhG18: Crosscheck report for JVT-AM0195	V. Zakharchenko (Nokia)

Informational		
JVET-AN0050	AHG18 : An Introduction to 5G Latency/Throughput Measurement and Real-Time Monitoring for ULL Application Scenarios	B. Jeon (TTA), S. M. Kim (LGUplus)
JVET-AN0254	AHG18: Packet marking mechanism for unicast scenario with channel feedback	V. Zakharchenko (Nokia)

1. Recommendations

The AHG recommended:

- Review all input contributions.
- Discuss test conditions and evaluation methodology, taking into account CfE evaluation results.
- Collect test cases and specific requirements.
- Continue development of simulation software.
- Continue the study of ultra-low latency and packet loss resilience technologies in Jvet.

Project development (48)

AHG1: Deployment and advertisement of standards (1)

Contributions in this area were discussed during 1910–1920 on Saturday 4 Oct. 2025 (chaired by JRO).

CITATION

S. Ikonin, S. Wenger, V. Zakharchenko, S. Deshpande, S. Fösel, C. Kim, X. Ma, S. Puri, J. Ström, "JVET AHG report: Ultra-low latency and packet loss resilience (AHG18)", JVET-AN0018, 40th Meeting: Geneva, CH, October 2025.