

6G_{XR}

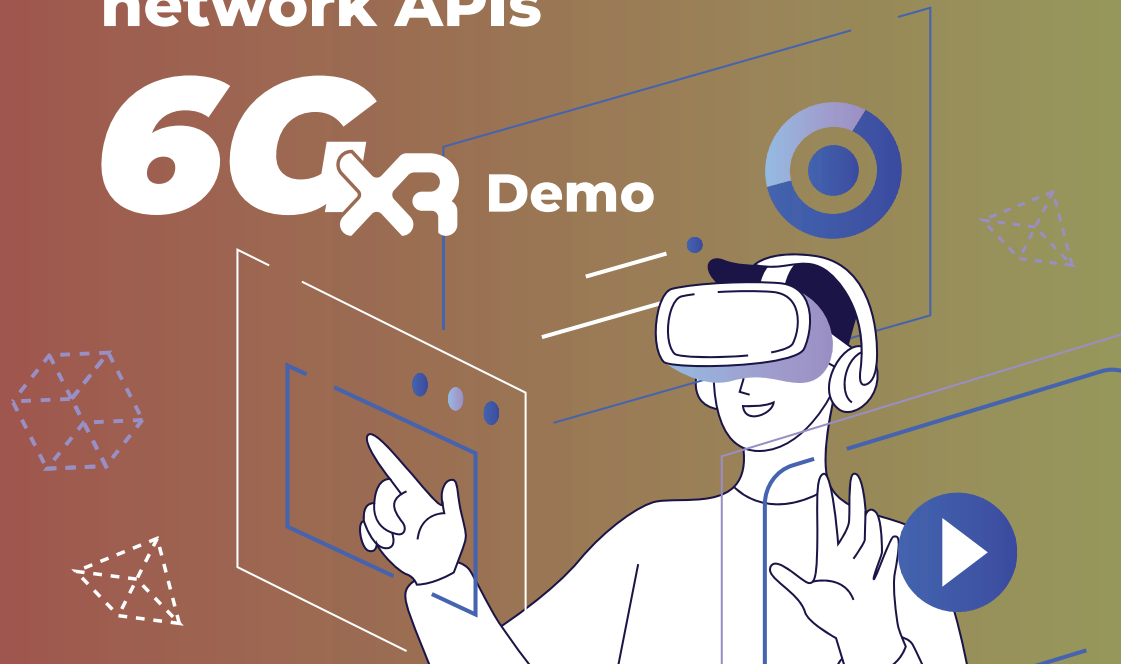
6G eXperimental
Research



Reliable holographic communications through congestion-aware network APIs



6G_{XR} Demo



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Co-funded by
the European Union

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Project funded by

 Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra
Swiss Confederation

Federal Department of Economic Affairs,
Education and Research LAKE
State Secretariat for Education,
Research and Innovation SERI



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Smarter network, more reliable holograms

This demonstration showcases how novel network APIs developed in 6G-XR can be used to enhance the performance and reliability of **holographic communications over 6G networks**.



6G-XR showcases three technology enablers:

- ① the **Congestion Detection Function (CDF)** monitors cell-level telemetry at high granularity to detect when congestion in the cell may degrade the quality of a holographic session;
- ② the **network-aware control plane function** receives congestion alarms from the CDF and adapts the rate used by the holographic session;
- ③ the **end-to-end holographic communication platform**.

Who benefits?

Mobile Network Operators (MNOs) exposing Network-as-a-Service (NaaS) APIs to XR service developers can benefit from this developed CDF, which could be integrated into the CAMARA connectivity insights API.



How it works?

1

Two XR users – one is connected via 5G network – participate in a holographic communication session.

An eMBB user connected to the same 5G cell as the XR user and starts congesting the cell.

2

3

CDF is not activated

XR users experience a degraded quality of service / experience due to the presence of congestion in the 5G cell.

CDF is activated

The holographic service receives a congestion notification and adapts the video data rate (*i.e., switches to a lower video resolution*) restoring a smooth communication.

4

5

When the eMBB congestion is removed, the holographic service is notified and the maximum XR resolution is restored.