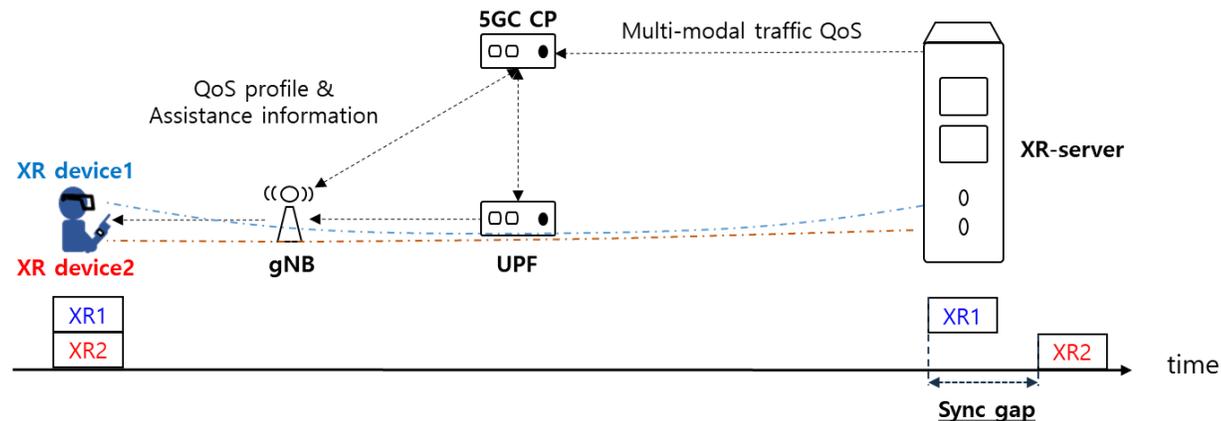


# Enhancements for XR in Rel-19

# Background and Motivation (1/2)

Rel-18 XR WI is addressing most XR-related issues, except multi-modality scenario.

- Multiple XR devices would be required for immersive XR services.
  - E.g., pair of glasses and haptic devices as shown in figure below.
- Data streams from multiple XR devices are closely related and require strongly coordinated transmission for application synchronization.



# Background and Motivation (2/2)

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**Depending on the scenario, the feasibility needs to be justified in SA side.**

- The following scenarios can be considered:
  - All XR devices are connected via NR UE i.e., tethering over NR sidelink/Wi-Fi/USB. → possibly covered by Rel-18 XR WI.
  - Each XR device is a standalone UE, and thus directly connected to a gNB. → requires substantial impact in SA side (e.g., considering subscriptions, etc.) and RAN needs to wait for their conclusion before having a WI.
- Based on the conclusion from SA for the second scenario, the UE-assisted or CN-assisted solution can be discussed and developed in RAN.

# Potential Objectives of the WI

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**The detailed objective of the work item, if proceeded, would be:**

- Specify mechanisms to support multi-modal data of XR media [RAN2, RAN3]
  - QoS flow/bearer mapping and handling for multi-modal streams
  - UE assistance information to assist gNB scheduling for coordinated multi-modal streams
  - LCP enhancement for coordinated multi-modal streams
- Study and specify mechanisms to serve a group of co-located UEs engaged in XR services [RAN2]
  - Potential AS layer impact depending on SA2 progress