

MPQUIC Use Cases

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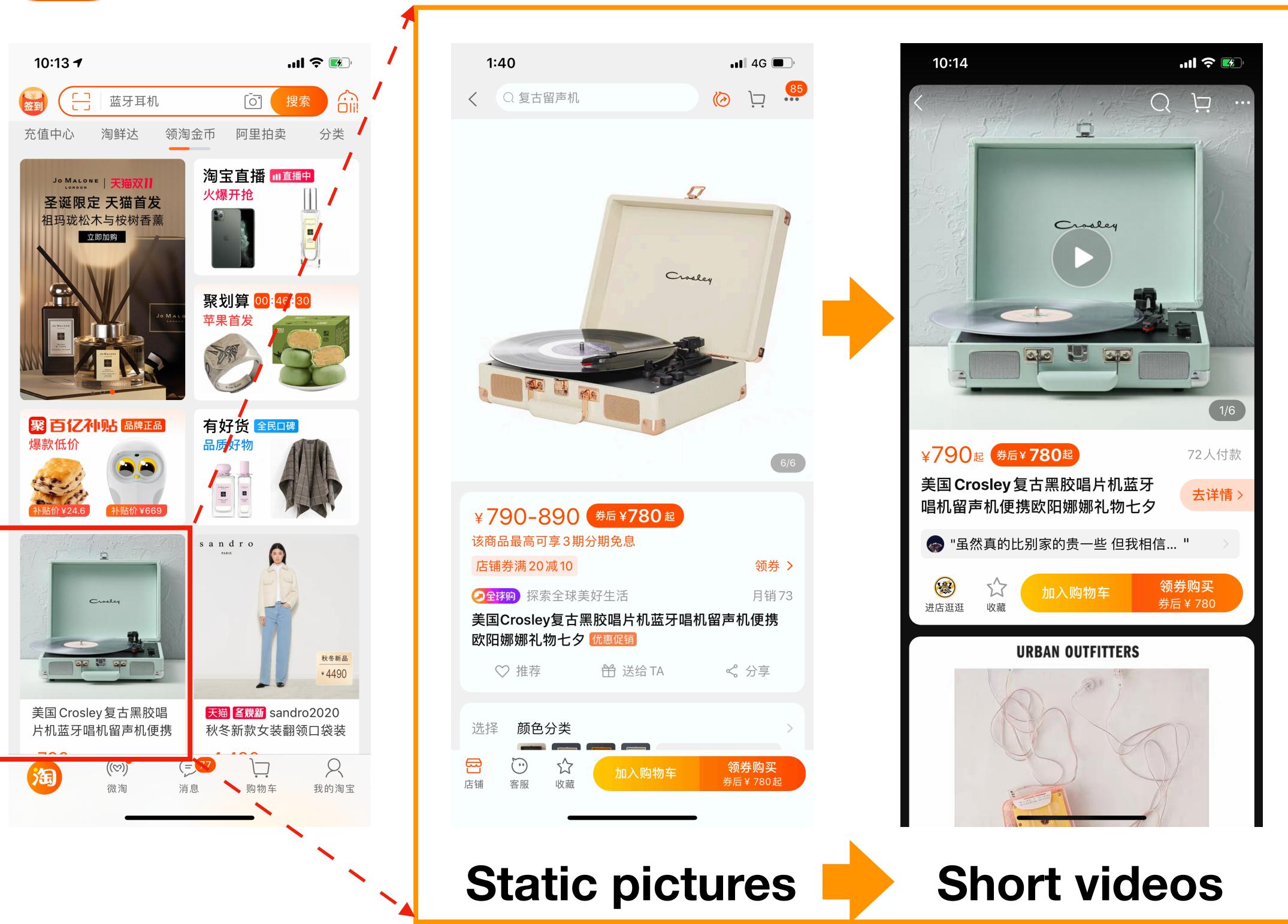
Contents

- **New-retail e-commerce use cases**
 - Short-form video play (with a MPQUIC demo)
 - Video/file upload
 - Live online shopping
- **Mobility use cases**
 - Online shopping / Business communication / Video entertainment on high-speed rails
- **5G and beyond**

New-retail e-commerce use cases



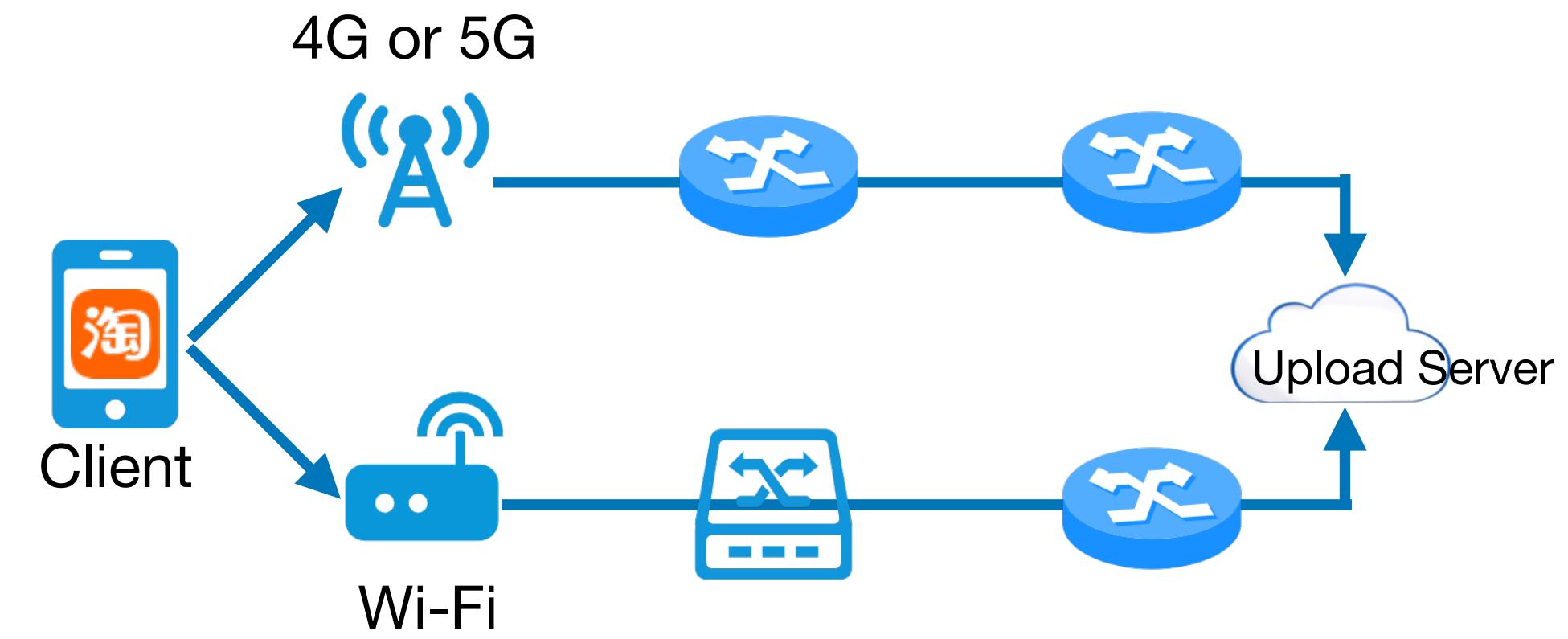
Taobao Mobile Application



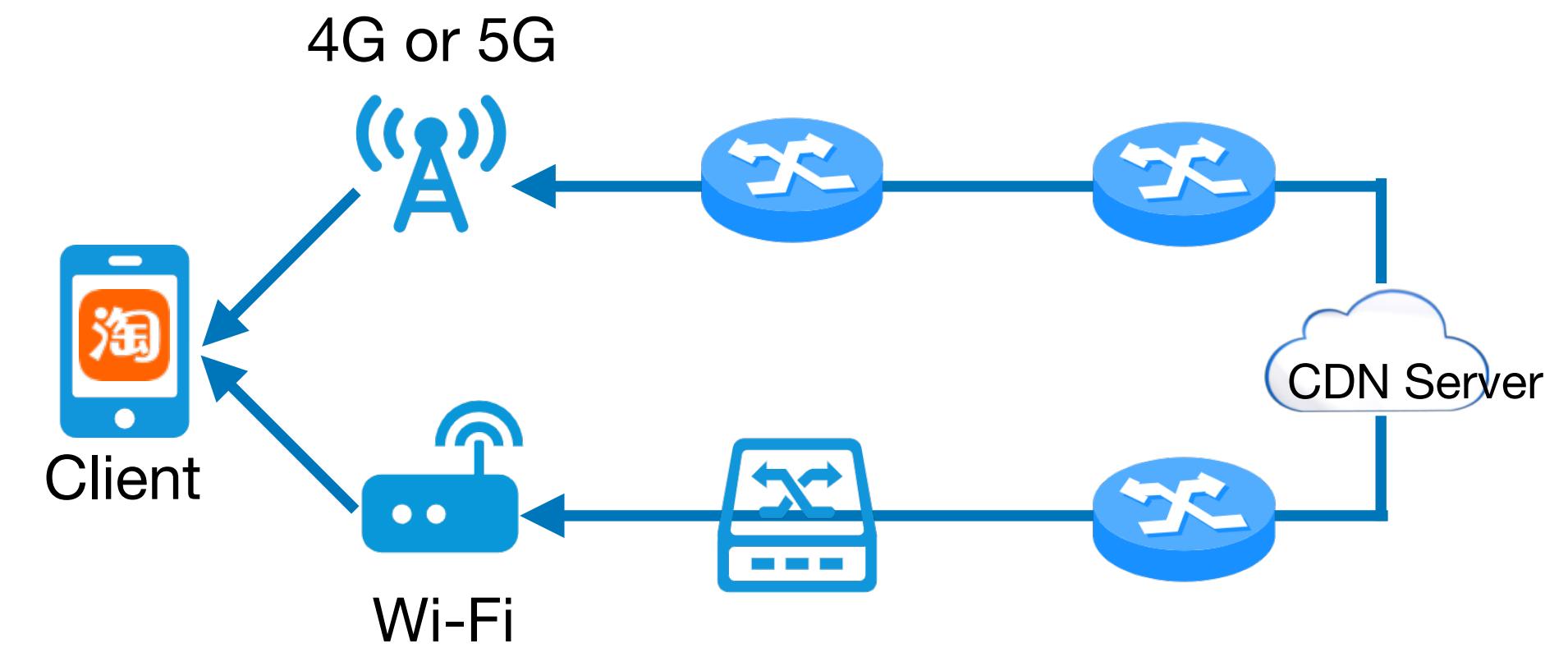
Short-form video has become the **most popular way of product marketing**

MPQUIC comes in handy with communications in **both Wi-Fi & LTE**.

- **Accelerating** video uploading & downloading;
- **Reducing** video stalling and re-buffering;
- **Offering** better QoE turns into users' more willingness to purchase.



Using MPQUIC in Video / File uploading



Using MPQUIC in short-form Video player

Taobao Live online shopping



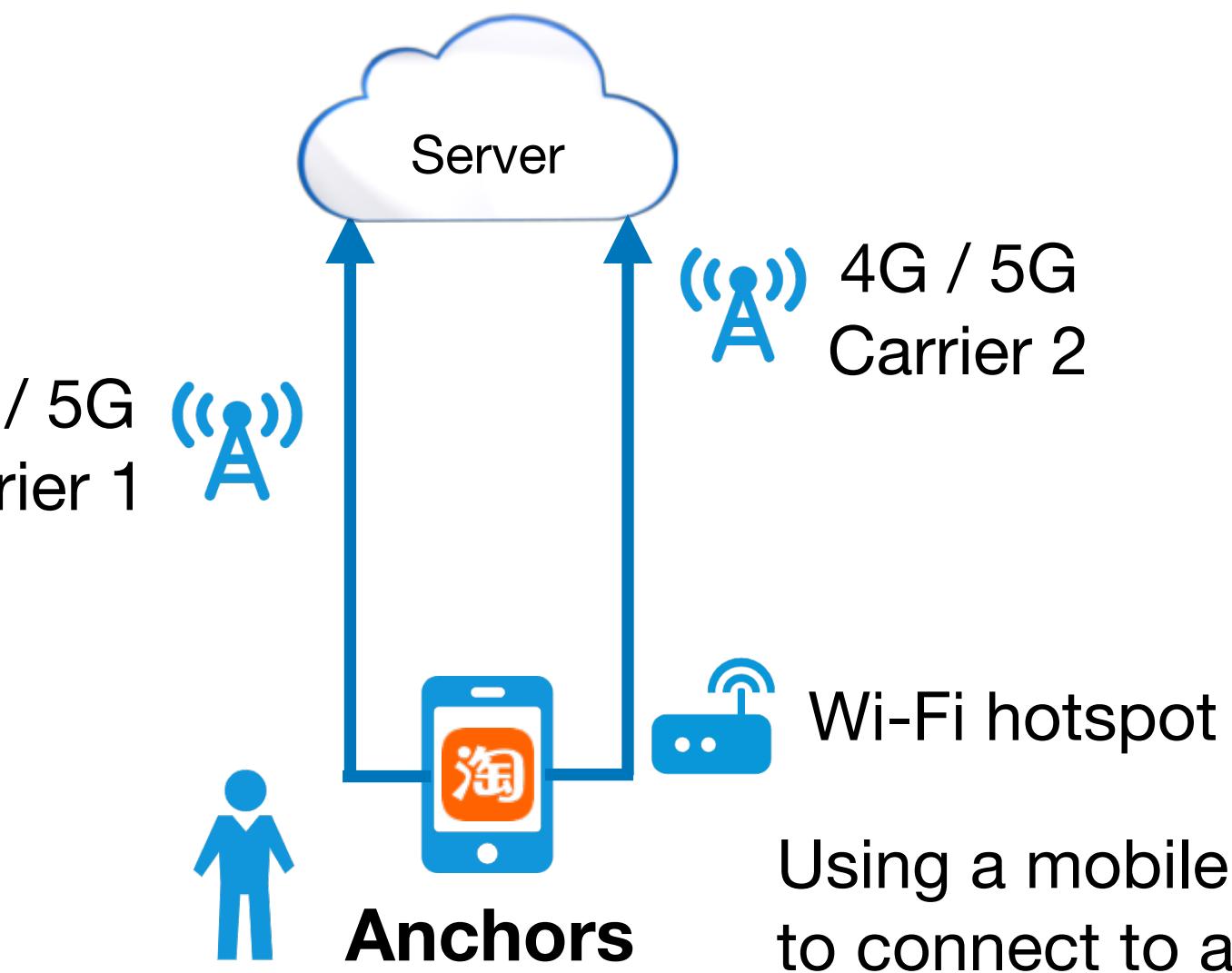
Taobao APP
Live video broadcasting



More and more anchors / internet celebrities stream outdoors

- Need more wireless bandwidth
- Require uninterrupted wireless handover

MPQUIC is useful by offering an additional connection to a second carrier through a mobile Wi-Fi hotspot

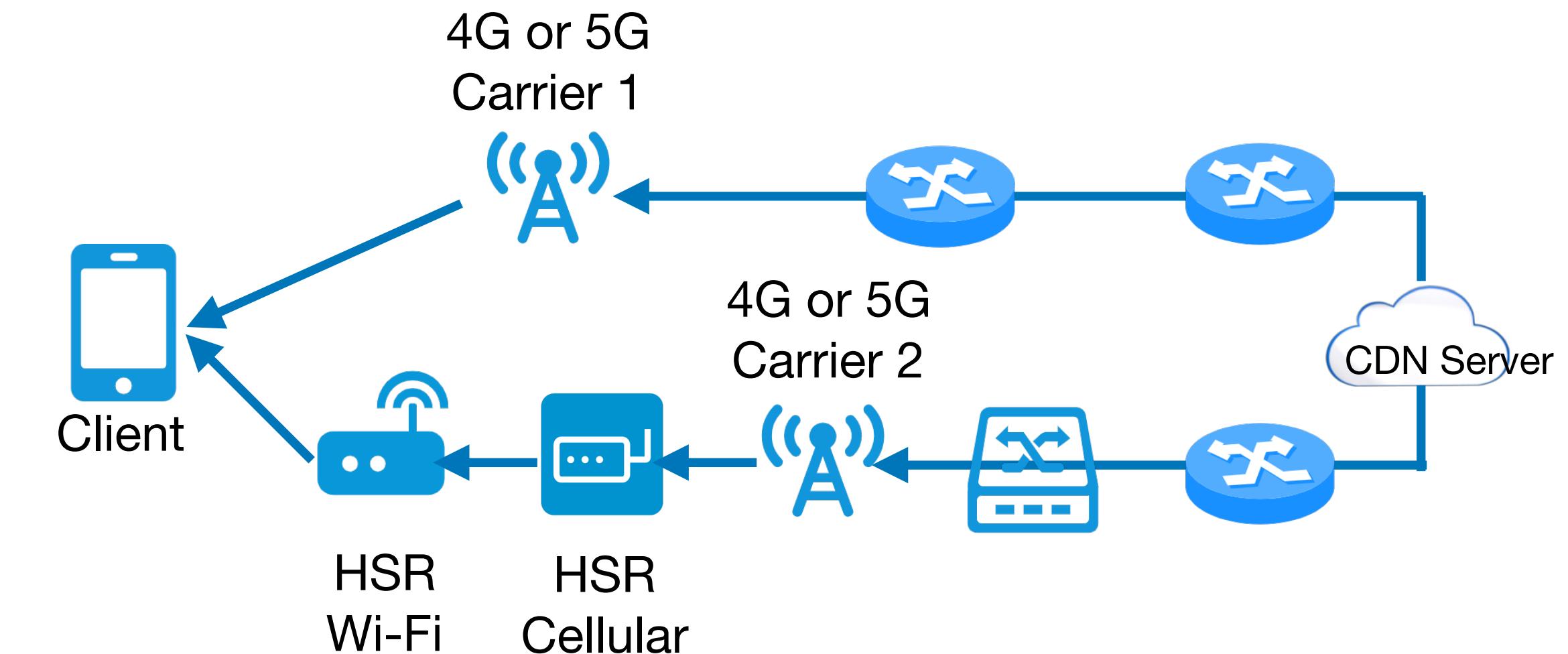


Using a mobile Wi-Fi hotspot to connect to a second carrier

High-speed rail(HSR) video streaming



HSR in China



Over **2 Billion** passenger railway journeys (2019)

Speed **300-350km/h**

Handover every **13.6s**

Wifi available but **unsatisfactory**

Taobao

Shopping & Payment

DingTalk

Business
Communication

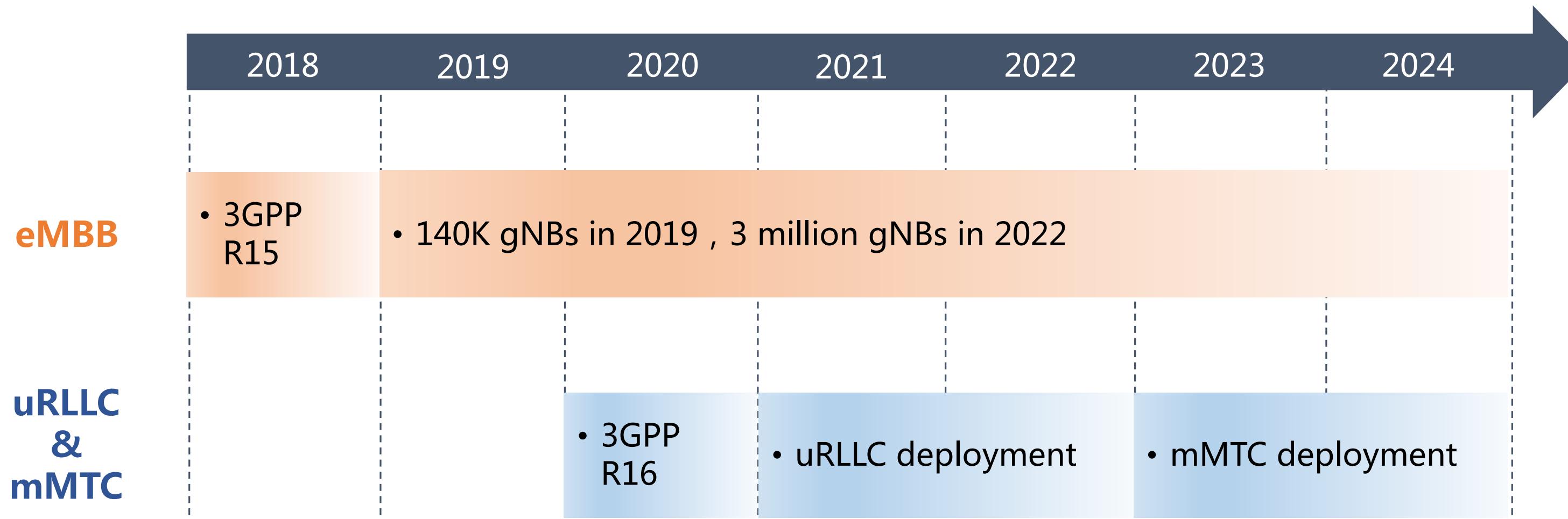
YOUKU

Entertainment

**MPQUIC offers better QoE
in extreme mobility**

5G NSA coverage problem

5G deployment schedule in China

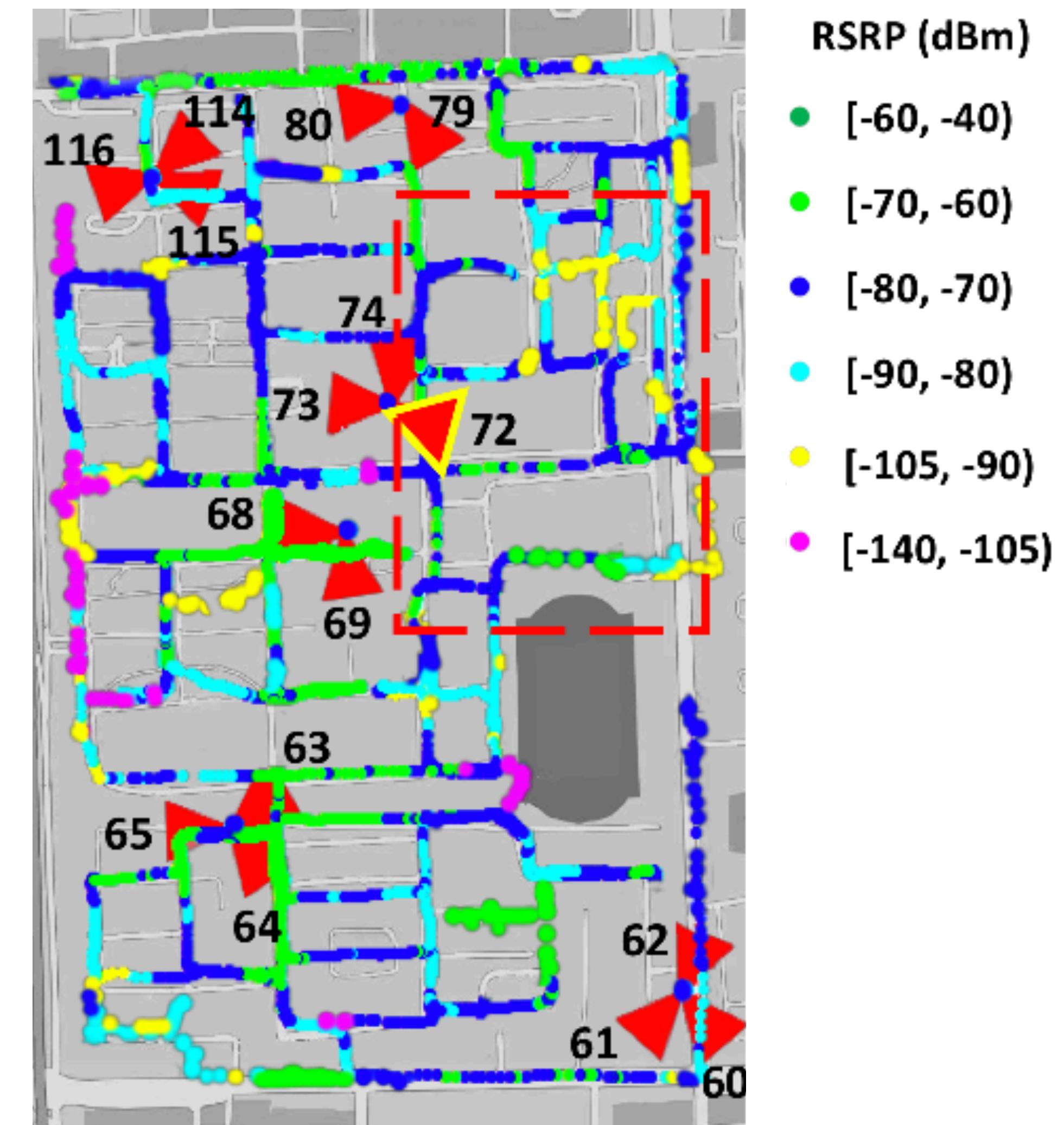


Higher frequency results in more coverage holes

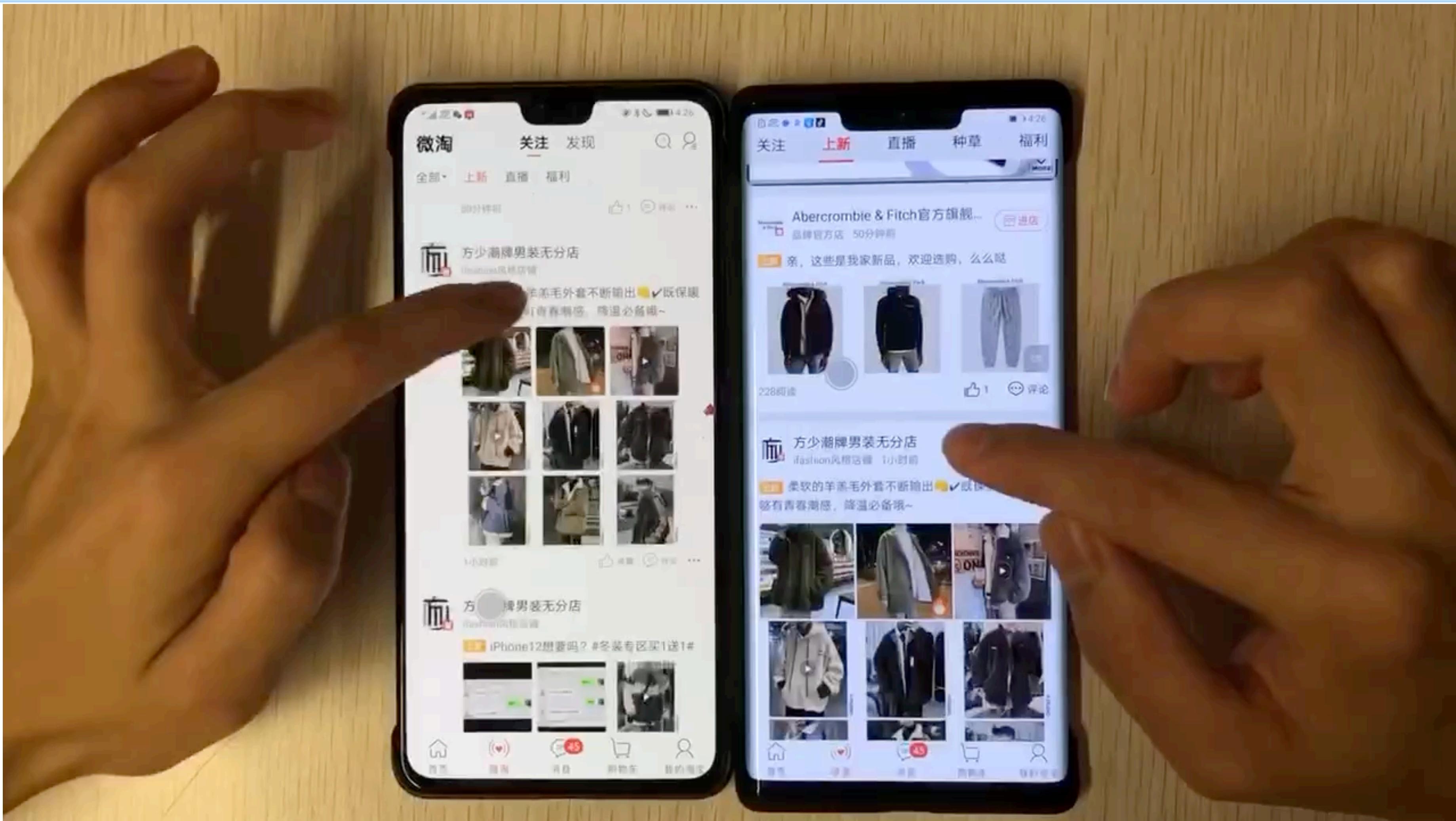
Coverage holes: 8.07% (5G NSA) vs 1.77% (4G)

Multi-path capability with non-3GPP access is desired

A 5G NSA Sub-6GHz measurement in Campus



Short-form video using MPQUIC in Taobao App (demo)



Left: Taobao APP with **MPQUIC** demo using both Wi-Fi & LTE

Right: Taobao APP with **QUICv1** using Wi-Fi only

When Wi-Fi bandwidth fluctuation occurs, the short-form video stalls on the right, while the video plays smoothly on the left