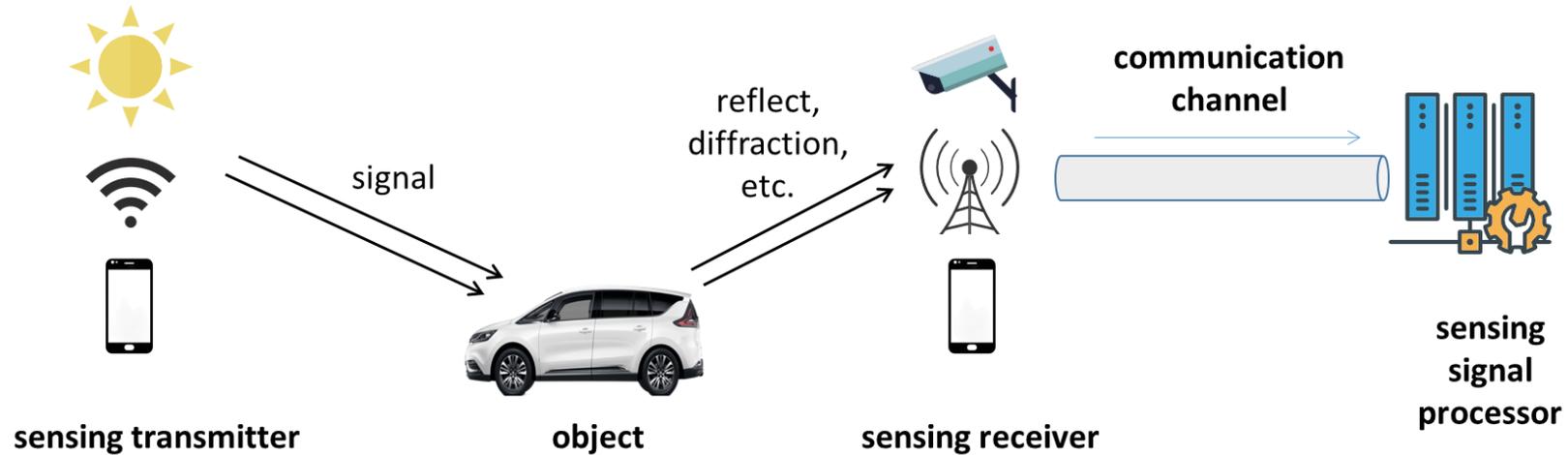


Discussion on sensing concepts and relationship between sensing system and 3GPP communication system

Source: Xiaomi
Agenda: 7.1

Key components of sensing system

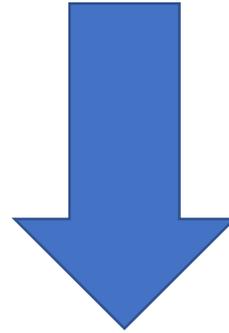


- Sensing transmitter
- Sensing receiver
- Communication channel (Optional)
- Sensing signal processor

Relationship between sensing system and 3GPP communication system



- Theoretically, functions of sensing transmitter, sensing receiver, communication channel, sensing processor could be performed by 3GPP nodes/entities or other devices which are out of 3GPP



- From concept perspective, sensing system and 3GPP communication system are two different systems, although part of sensing system functions could be performed by 3GPP communication system via reusing 3GPP communication system or enhanced 3GPP communication system
 - Integrate sensing system to 3GPP communication system to form Integrated 3GPP Sensing and Communication system

Discussion on names of components of sensing system



- Propose to use new terms for sensing system to avoid ambiguity between sensing system and 3GPP communication system since term 'transmitter'/'receiver' are widely used by 3GPP communication system
 - sensing transmitter → sensing emitter
 - sensing receiver → sensing detector
- Allowing both generalized and specialized terms/description to cover all use cases
 - For Sensing transmitter/Sensing receiver
 - To generalize: If functions of sensing transmitter may be performed by any 3GPP entity, just use term 'sensing emitter'; If functions of sensing receiver may be performed by any 3GPP entity, just use term 'sensing detector' (cover most use cases)
 - To specialize: If functions of sensing transmitter is only performed by 3GPP specific entity, just make it clear with bracket after a generalized term (cover rest of use cases)
 - For example: sensing emitter (here specifically refer to gNB), sensing detector (here specifically refer to UE)
 - For Sensing processor (if needed)
 - To generalize: Sensing processor
 - To specialize: Sensing processor (here specifically refer to gNB), Sensing processor (here specifically refer to UE), etc.

New TS for WID



- Create a new TS to capture the normative phase service requirements as derived from TR 22.837.



XIAOMI

Thanks