Overview

Let's start with the basic architecture, which you can check out in our Open RAN videos. Using 4G LTE as an example, the two interfaces from the RAN point of view are:

- The Air interface, also known as Uu or LTE-Uu interface that uses the RRC protocol
- The S1 interface, between the RAN and the Core

Interfaces

Both of these interfaces are standardized by 3GPP and open, so no issues here. However, the simplifed 4G network is more like what is shown in this diagram, if we go just a little bit in detail. There are 2 more interfaces that are the key reason the Open RAN movement started.

The frst is the fronthaul. As we discussed in our Open RAN concept video, there are two components in the RAN. The virtualized BBU software that runs on COTS servers and the Remote Radio Head or RRH. The interface between them is known as fronthaul, and it uses the CPRI protocol. This protocol generally has vendor-specific implementation and is not necessarily open. Open RAN-focused organizations are trying to get rid of this CPRI in212 46TmI inha5.

The second interface to note is the X2 interface. Even though this interface has been defined by 3GPP, it is an optional interface. Many incumbent vendors intentionally did not implement this initially and, when