eSIM Transfer Interoperability

This submission relates to **Point 6.1 of the BEREC 2026 Draft Work Programme**: "BEREC inputs to the regulatory framework review and the DNA."

Background:

Samsung Electronics (SE) would like to take this opportunity to raise awareness about an issue that has not been covered yet by previous work on the Digital Networks Act (DNA)/update of the European Electronic Communications Code (EECC) but should be included. Specifically, the interoperability of electronic subscriber identity modules (eSIMs).

SE already raised this topic three times previously via public consultations, first as feedback to the draft BEREC 2025 work programme, once during BEREC's call for early input to the 2026 Work Programme, and finally in the European Commission's call for evidence on the DNA. SE would like to take this opportunity to raise this eSIM interoperability issue once again, as **the use of eSIMs across the European market is steadily increasing and we are now beginning to see the first eSIM-only devices being introduced in the European market.** To give concrete suggestions as to how lawmakers and regulators could address this issue, SE also wants to **provide concrete suggestions for including eSIM interoperability within the scope of the EECC/DNA.**

To briefly describe the issue once again:

An eSIM is a digital innovation in device connectivity where software is installed directly on the connected device chip, instead of requiring the user to insert a physical card into their connected device. This technological evolution offers users enhanced experiences like:

- flexibility in managing their service plans (add a second plan without requiring a physical SIM card or SIM tray);
- facilitating switching between carrier networks in just a few clicks;
- transferring of one plan between devices without physically swapping a SIM card.

Like physical SIM cards, eSIMs contain data that enables devices to identify and authenticate users to their network providers. Therefore, they are vital for users to switch their network plans from device to device.

However, at the moment, consumers using eSIMs are being locked into their devices if they wish to switch between devices with different operating systems (OS) since the current eSIM-switching experience between different OSs is quite inconvenient and not user friendly.

In comparison to eSIMs, physical sims have no restrictions on interoperability between OS, devices, or Mobile Network Operators (MNOs) and therefore offer consumers easier switching opportunities.

Operating System Lock-In

To enable device switching, the OS plays a crucial role. Specifically, it interacts with the eSIM software to download the user's credentials on the old device to access their subscription on the new device through secure exchange of eSIM information. As a result, eSIMs require OS functionality to support this device-switching function.

Using industry-wide (GSMA) specifications for eSIM switching is crucial in this context, as this will ensure consumers have the same convenient process to switch eSIMs that they do when switching physical SIMs – especially across Operating Systems.

Entitlement Server Lock-In

In addition to the OS lock-in, there's another barrier to seamless eSIM switching. This time, on the network operator side with entitlement servers.

eSIM "Entitlement Servers" are a key component to make eSIM switching work, as:

- they sit within the mobile network operator's network infrastructure and serve as an interface between the network and the end user's device;
- they allow carriers to manage services on user devices;
- they also enable the onboarding process to facilitate the transfer of eSIMs between devices.

In general, entitlement servers follow industry standards (GSMA) to ensure compatibility with multiple manufacturers' devices. In addition, in order to enable cross-platform eSIM transfer, an entitlement server must support the OS specifications of both the source (old) and target (new) devices. However, when entitlement server specifications differ from GSMA's or do not support multiple OS specifications, consumers face difficulties when switching devices, especially across operating systems.

Currently, among 60 network operators across 22 EU Member States, the UK, Switzerland, and Norway, only 16 carriers' entitlement servers support multiple OS specifications while 33 support just a single OS.

It is important to note that there are multiple methods for users to activate and switch eSIMs, in particular Subscription Management – Discovery Service (SM-DS). This is often the preferred method for mobile network operators, but it only works for consumers who directly purchased their device through the mobile operator. This method therefore does not work for "unlocked" phones. While SE supports the continued use of SM-DS as a user-friendly activation or switching method, it should not detract from achieving entitlement server interoperability. Both SM-DS and interoperable entitlement servers are needed to enable seamless eSIM switching and activation.

Proposed Solution

SE would urge the EC to consider eSIM interoperability within the scope of the updated EECC/DNA proposal, and would hope that BEREC, as an organization that takes consumer protection very seriously, would also advocate for these measures in the DNA.

Specifically, SE has a few suggestions as to where this topic could be included in the text of the current EECC.

Article 3(2)(b) EECC explains that one of the EECC's central objectives is to promote competition in the provision of electronic communications networks/services and associated facilities. An eSIM entitlement server can be considered part of a network or as an associated facility. In the spirit of promoting competition in this sector, SE would urge the EC to examine how mandating the use of this widely-accepted GSMA standard would impact consumers going forward, as more devices switch to eSIM-only.

Article 61(3) EECC explains that national regulators, upon reasonable request, may obligate providers of electronic communications networks (MNOs) to provide access to "wiring, cables, and associated facilities" of their network infrastructure. SE would argue that entitlement servers for eSIMs constitute "associated facilities." Asking operators to allow device manufacturers access to their entitlement servers for the purposes of eSIM switching would, in SE's view, constitute a "reasonable request."

Article 39(2) EECC states that Member States shall encourage the use of standards or specifications for the provision of services, technical interfaces, or network functions to "ensure interoperability of services, end-to-end connectivity, facilitation of provider switching and portability of numbers and identifiers, and to improve freedom of choice for users." As stated before, there are already internationally-recognized standards for eSIM switching and entitlement server interoperability, which is currently not being encouraged by Member States. Given that these industry-wide (GSMA) standards for eSIM interoperability exist, SE would hope that Member States would ensure all market players are adhering to them to ensure, as stated in the EECC, "freedom of choice for users" switching devices across operations systems.

SE remains available for further exchange on this topic.