

On behalf of the Special Telecommunications Service, the administrator of the emergency system in Romania, please find below our opinion on BEREC's report on practices and challenges of the phasing out of 2G and 3G.

The STS Romania opinion on BEREC's report on practices and challenges of the phasing out of 2G and 3G

As the administrator of the emergency system in Romania, but also as the provider of IT&C infrastructure and services for the state and public authorities, the Special Telecommunications Service welcomes the initiative of the European Commission to consult the stakeholders on the phasing out of the 2G/3G technologies.

As much as we consider it necessary to advance to the newest technologies in order to provide top-quality services to our beneficiaries and better access to emergency services for Romanian and European citizens, there are still concerns related to phasing out the circuit-switched technologies. In the first place, emergency calls over LTE or 5G are not permitted by the national carriers. There are developments that still need to be made by both MNOs and the PSAP to ensure continuous access to the emergency system for voice calls and associated information, like the location information (e.g.: Cell-ID, E-CID, AML). This impact is being addressed at the moment by carrying out tests with some of the MNOs that are reconfiguring their networks and adapting the 112 system to process emergency calls from 4G networks. However, the known VoLTE interoperability problems (including for roamers) involving chipset producers, mobile network operators and device manufacturers should be prioritized, to ensure seamless access to the emergency systems across Europe for all citizens. All stakeholders should actively get involved in testing all compatibility aspects.

We acknowledge the great impact on the eCall service which is bound to the CS networks. As we speak, hundreds of thousands of vehicles are leaving the production lines each day equipped with legacy IVS devices. By turning off 2G/3G networks, the citizens buying these vehicles will not be able to rely on their cars to reach the emergency services in case of severe accidents. Although there are advancements in the standardization of Next Generation eCall, the measures that would need to be taken at the European level in order to ensure the future functioning of eCall on PS technologies should not induce costs on the citizens, nor on the car manufacturers that are now implementing the service by complying to current regulations. Also, it's important to say that the IVSs for Next Generation eCall are still made just for test or pilot activities.

At the moment, in Romania, the access to the emergency service for persons with disabilities is based on the SMS service. This service is ensured by default on all user devices and on all mobile networks using CS technology because SMSoLTE and SMSoWiFi are not implemented by all the MNOs present in Romania and phasing out 2G/3G will limit the possibility of access to emergency services for people with health impairments. The PSAP also relies on SMS services to locate the caller using Advanced Mobile Location - AML (the mobile terminal sends AML location by using SMS) and sometimes using the Geolocation solution (which sends an SMS containing a link to the caller that conveys the device's location information to the emergency system). These features will be affected by shutting down 2G/3G networks.

The NRA is an important stakeholder that already adapted the national regulation imposed on the MNOs and the PSAP to adopt the new type of communication.

The efficiency of the intervention by the specialized emergency services could be impacted by switching off legacy mobile networks, as the communication between the dispatchers and the mobile resources is often carried out using 2G/3G interfaces connected to the PABXs in the emergency system, that allow exchanging calls only on these networks. This is a minor impact as it could be mitigated by replacing the interfaces with 4G compatible ones, or by ensuring new SIP connections for outgoing calls through the new NG112 system.

Another impact on the intervention is caused by some medical equipment that relies on 2G/3G communication (like defibrillators on mobile resources) to send the ECG data to the specialized personnel. Adapting the device to 4G technology might not always be possible, conducting to high costs on the medical services for replacing the entire unit. The same effect could be perceived by other business users that exchange data using 2G/3G only compatible devices (e.g. public order services, POS devices, security and monitoring systems that send data in GPRS standard). Sometimes, only by replacing the end-user equipment could the functionalities be restored. The costs for replacing the terminals could be covered either by the MNOs or by national programs, to not overburden some vulnerable segments of the population. Other services provided to our beneficiaries and population will be affected like toll payments, parking fee payments using SMS, different information requests or checks using USSD codes, etc.

Another aspect that will need planning and will have financial consequences after the 2G/3G phase out and wide adoption of 4G/5G devices will be the need to upgrade the IT&C infrastructure, interfaces and links to accommodate the aggregated throughput of all the devices that will have higher data usage as new services become available.

Another aspect that should be taken into consideration as 5G is gaining more traction is the mitigation of security vulnerabilities that can be exploited by having easy access to high speed, low latency mobile connections given that the 5G environment unlocks new capabilities, new services and a wider attack surface. To provide a unified minimum layer of security for both 4G and 5G communication NRA should enforce a set of requirements that will be implemented at the MNO level that will minimize the risks for all involved, vulnerable parties.

To ensure the same level of access to services, including access to 112, at least the same coverage should be ensured by the 4G/5G networks. NRAs should pay special attention to this aspect.

In the end, we would hope for more transparency on the plans of the MNOs to shut down 2G/3G networks, enforced by the NRA, to allow informing the public on the soon-coming changes. This will diminish the impact and costs on the citizens and businesses, allowing them to adapt to the new services and adopt the new technology.