**3GPP TSG-SA WG1 Meeting #92e S1-204197**

**Electronic Meeting, 10 - 19 November 2020** *(revision of S1-20xxxx)*

Title: FS\_GET Feature affected by Extraterritoriality - PWS

Agenda Item: 7.5.1

Source: TNO, Thales

Contact: toon .norp (at) TNO. nl

*Abstract: This contribution proposes a section on PWS for the FS\_GET TR 22.926.*

===================First Proposed Change==========================

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 22.011: Service accessibility

[3] https://www.un.org/depts/los/convention\_agreements/texts/unclos/part7.htm

[x] 3GPP TS 22.268: "Public Warning System (PWS) requirements"

…

[x] <doctype> <#>[ ([up to and including]{yyyy[-mm]|V<a[.b[.c]]>}[onwards])]: "<Title>".

===================Second Proposed Change – all new text ==========================

## 6.x Public Warning System

PWS as described in [x] provides the public with alerts, warnings and critical information regarding disasters and other emergencies. The general PWS requirements in [x] are supplemented with regional specific requirements for the Earthquake and Tsunami Warning System (ETWS), the Commercial Mobile Alert System (CMAS), EU-ALERT, and the Korean Public Alert System (KPAS). There is also an Extended PWS, with additional requirements for UEs with no user interface or with a user interface that is incapable of displaying text-based Warning Notifications. In addition, enhancements of Public Warning System (ePWS) is intended to improve the comprehension of a Warning Notification for users with disabilities or for user who are not fluent in the language of the Warning Notifications.

PWS and its different regional variants are generally covered by regulatory requirements (e.g. laws or other regulations). These regulatory requirements can take the form of regulations on operators to support PWS and/or in the form of regulations on devices that are sold in a particular country/region to support PWS. Issues with extra-territoriality can appear when it is not clear which of the national or regional regulatory requirements apply, e.g. in maritime or aeronautical areas. This can include that it is unclear whether PWS should be supported and/or which of the regional versions of PWS must be supported by the operator.

With PWS, Warning Notifications are provided by a Warning Notification Provider. In each country where PWS services are provided, there are procedures in place to determine who (e.g. which agencies or local authorities) can be a Warning Notification Provider. It is unclear whether there will be an organisation with responsibility for coordinating Warning Notifications in extra-territorial areas (e.g. maritime or aeronautical authorities). An alternative is that the network operator selects which Warning Notifications Provider(s) to use for extra territorial areas. It is clear that a satellite operator with a satellite network covering multiple countries and/or extra-territorial areas will have to interface with multiple Warning Notification Providers.

The Warning Notifications likely include the following five elements:

- Event Description

- Area Affected

- Recommended Action

- Expiration Time (with time zone)

- Sending Agency

The Warning Notification Provider will provide information about in which area the Warning Notifications should be distributed. Based on the geographical information indicated by the Warning Notification Provider, it shall be possible for the operators to define the Notification Area based on their network configuration of the area coverage such as distribution of cells.

With satellite networks, it is possible that the area covered by a single cell is much larger than a cell area in the terrestrial network. This can become a problem when satellite coverage and terrestrial coverage overlap. Satellite users may receive information that is not targeted at the area they are in. The difference in coverage areas may also cause confusion between users of different types of access. A possible way of addressing this issue is by filtering Warning Notifications on the UE based on Area Affected information within the Warning Notification and location information available on the UE.

NOTE: It might be necessary to include altitude information in location information.  
  
OR

Editor’s Note: It is FFS if altitude information in location information needs to be considered.