

COUNTRY REPORT BERLIN

GERMAN FEDERAL STATE

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BERLIN



Outline

- Information on events in 2022/2023
- IT-Security of SA*POS*[®] in Berlin
- Developments in Berlin
- Summary

Information on events 2022/23

- In December 2022/ January 2023, other federal state had problems in the case of providing correction data derived by GNSMART. After comparing the settings between Brandenburg and Berlin no major difference could be found. In Berlin, the effect could not be seen regarding the dense network. GNSMART had problems with modelling the ionosphere in wider networks.
- Problems arose for user of Leica Viva with satellite ids larger than 44. Users had unexpected RTK connections resets. The problem only occurred when satellite 45 or 46 were visible. We recommended the use of 3G for user of Leica Viva or other users if there are problems with BEIDOU during measurements.

What is the experience in other EUPOS countries?

IT-Security of SA*POS*[®] in Berlin

- The service of SA*POS*[®] in Berlin is going to be advance on advises and provided information of the „Federal Office for Information Security“ (Bundesamt für Sicherheit in der Informationstechnik, BSI) which are yearly updated.
- Firstly, the documenation of the service and its IT-infrastructre are updated.
- Secondly, the advises and information from BSI are tested versus the infrastructure and the servivce.
- Thirdly, current steps technical and organisational arrangements are defined to improve the IT-security of the SA*POS*[®] service in the federal state of Berlin.

Examples for improving the IT-Security

- Redundancy for the data transmission from the GNSS reference station to the computation center.
- Two independent computation centers with two independent internet access where one is realized by LTE.
- Checking the services with independent monitoring stations and servers.

Future of the SAPOS[®] service in Berlin

- Change to self-operated computation centers in using cloud services based on the advices of the BSI.
- Set-up and installation of additional, self-sustaining monitor station(s) for validating the current and future services.
- Combination of GNSS station(s) with Corner Reflector(s)

Developments in Berlin

- Signal interference are seen. Monitoring of signal interference at the reference stations is going to be set up.
- Signal authentication will be additionally included for higher integrity within the SAPOS service in Berlin.

Summary

- The federal states of Berlin updates the system and service to fulfill the IT-security standards and requirements.
- The computation are planned as a cloud service up to 2027.
- A monitoring of signal interferences and signal authentication are planned.

Thank you.

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