

ARTIST capabilities

- **ARTIST sentinel detects the presence of several types of interferences over the GSM downlink spectrum.**
- **ARTIST identifies interferences with very low power, even when the interference is active but it is not disrupting GSM information, enabling an early-warning.**
- **It detects interference signals with the very same modulation format as GSM, enabling anti-spoofing countermeasures.**
- **A network of ARTIST sentinels can be easily deployed in order to perform interference localization through triangulation.**
- **ARTIST sentinels can be used as an effective defense against cyber terrorist attacks.**

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The demo video is available at:
www.wiser.it/video.php

WISER S.r.l. (Wireless Systems Engineering and Research) is a company established in 2004 to provide technical and engineering support in the field of wireless communications.

The main areas of expertise of WISER are Software Defined Radio, digital receiver design for communications and satellite navigation, physical layer simulation of wireless communication systems and interference detection/cancellation algorithms.

"Digital Craftsmanship"



WISER

**Wireless Systems
Engineering and Research**

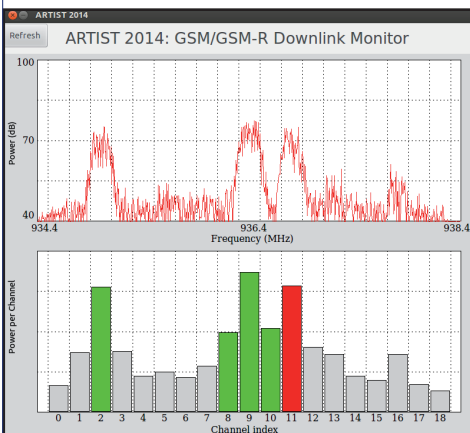
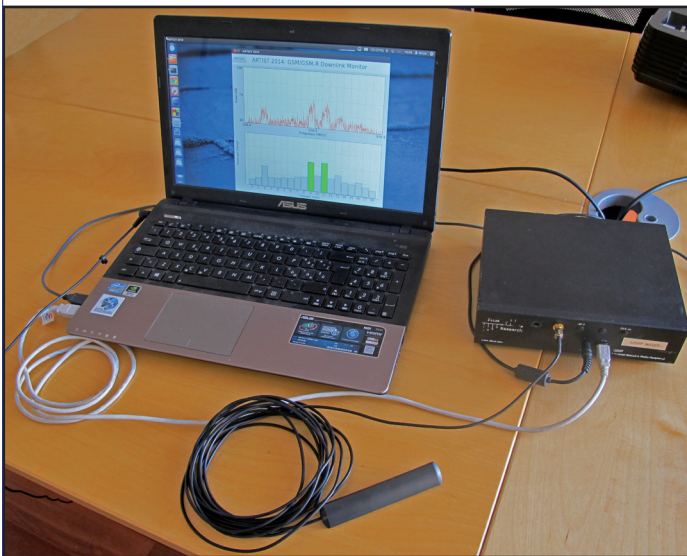
- Livorno, Italy -

**ARTIST:
Advanced inteRference
deTectiOn techniQues for
gSm sysTems**

www.wiser.it

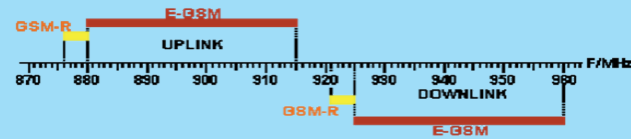
ARTIST is an SDR-based HW/SW suite designed for monitoring the radio integrity of GSM/GSM-R networks

ARTIST is low-cost and suitable for a massive deployment.

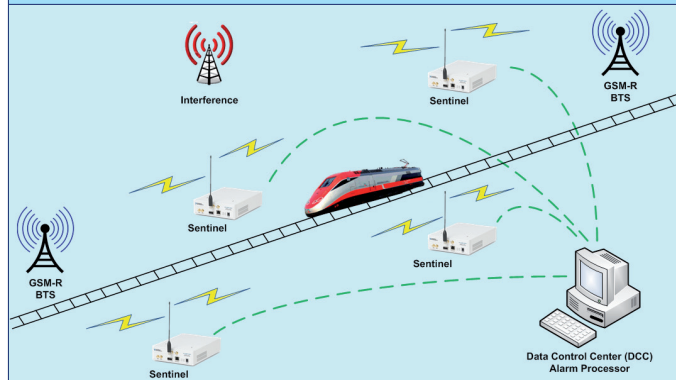


Idle channel
GSM ch. / tail
Interference

Interference over GSM-R spectrum has become a crucial theme since high speed train information is conveyed over GSM-R radio signals. The European Union has highlighted the need for some regulations, which foresee an efficient interference detection system as well as a reliable mitigation mechanism.



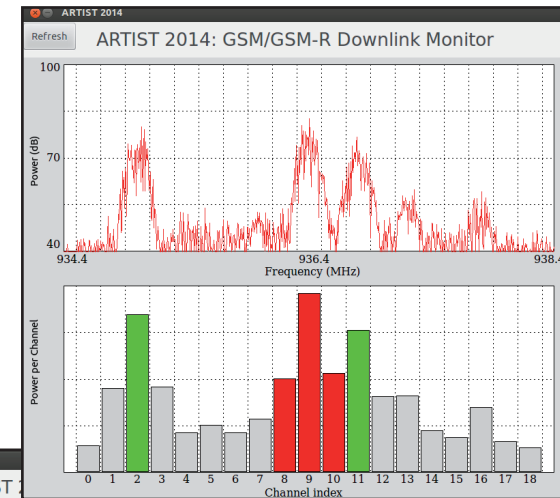
Application scenario



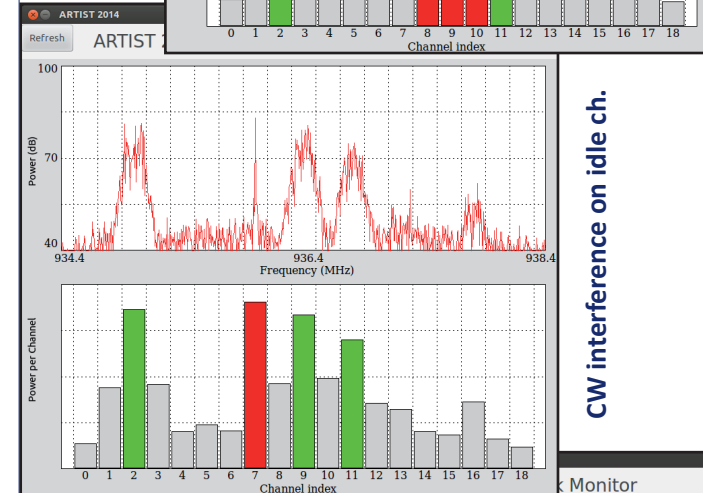
A geographically distributed set of ARTIST sentinels used for interference sources localization.

Interference Detection in critical infrastructures

CW interference on GSM ch.



CW interference on idle ch.



Wideband interference

