Functionality and requirements for

Remote tuning of WG tagging systems.

All our visible or invisible EAS antennas work on independent from any IT system.

EAS-operation principle:
They transmit a magnetic wave, and tags attached on your merchandise respond to that wave, when they get close to the field around the antenna.
The system is analyzing this return signal and causes an alarm if needed.

Service Reasons:
Experience shows that most service calls are either related to operator errors.
The most common user error is "tags in the field". Security tags or labels close to the antenna cause an alarm. Often a label has been found in a bin close by. Sometimes a protected garment had been hung Next to the antenna, and causes the alarm.
Changes in the environment that require new synchronization are less often the reason for service calls.

Both can be managed remotely or at least a technical verification of the real reason can be done.

In case of a service request, our operator connects to a system via the internet and analyzes the case. Is an alarm resulting from detected tags or other reasons such as noise or interference.
If tags are the reason he can guide you staff how to find them. If noise is the reason he can change the setting of the antenna.
Even new synchronization of devices may be done remotely.

Technical requirements:
Our systems have been designed to be able to connect through the internet, without the need of extra infrastructure. The required bandwidth is little and usually no LAN cables are available at the installation point. Therefore we designed our antennas to Wi-Fi. This is simple and requires not expensive infrastructure investment. Not even cabling costs.

We recommend to create a separate, dedicated invisible Wi-Fi net for our system, which should be set on "invisible" mode.
But every regular Wi-Fi network, even your guest network is possible. – Only one thing: The guest Wi-Fi must not terminate the connection after i.e. several hours, as some guest networks do, to avoid unwanted permanent users.

Our systems are programmed to a default SSID for our remote tuning
SSID Respectively Network Name: **wgcloud**
Password: **4487uh9y**

If you demand a different SSID & passcode we will change the system setting at installation.

      Important for the network administrator:
      Please make sure that port forwarding is enabled for **ports: 8799, 8899 and 9051**

The **password must be permanently valid** and must expire i.e. after 24 hours.

Should the network fail, or the system power fail, the system automatically reconnects after rebooting. We recommend that the Wi-Fi network is set up invisible for the public.

The required bandwidth and data volumes in normal operation and in case of remote access are so minor that a even with slow GSM connections, remote tuning is possible. In normal operation, a status check consisting of only a few bits is transmitted in sequences.

Example setup:
Most routers in a 100 Euro range, allow to deploy 5 or more independent WiFi networks.
Four of these networks may used for other purposes (internal, guest, …)
One shall be set up as an invisible network only for EAS.

Your benefit:
Enabling the WG Wi-Fi remote tuning will
- **help to increase the system availability and**
- **reduce lead time and service cost.**

There is no hardware investment and no connection or labor fee.

Security means:
To dial into a system, the current WG Digitool Client software is required. The user needs to have access rights for the particular System ID and the region and area that the system is installed.
Without such access rights and without the correct software no data can be seen, and no setting can be changed.

Which information is transmitted:

These screenshots explain what kind of data´s are transmitted when remote service is activated.
The system does not record and can not transmit any personal data (privacy & GDPR) or any store performance data´s.

The system periodically sends a status message (online / offline).
The Event Log records every alarm and every log on, regardless if the operator was just watching the figures or debugging (tuning) the system.

	EAS ID	Operator	Action Description	Time
1	A0-60-01-14/08-00021		Online	11/20/2014 3:58:30 AM
2	A0-60-01-14/08-00021		Offline	11/20/2014 8:30:10 AM
3	A0-60-01-14/08-00021		Online	11/20/2014 8:30:53 AM
4	A0-60-01-14/08-00021		Offline	11/20/2014 9:15:10 AM
5	A0-60-01-14/08-00021		Online	11/20/2014 9:15:22 AM
6	A0-60-01-14/08-00021		Offline	11/20/2014 7:21:40 PM
7	A0-60-01-14/08-00021		Online	11/20/2014 7:21:47 PM
8	A0-60-01-14/08-00021	wgglobaluser	Debug EAS	11/21/2014 1:50:56 AM
9	A0-60-01-14/08-00021	wgglobaluser	Debug EAS	11/21/2014 1:59:58 AM
10	A0-60-01-14/08-00021	wgglobaluser	Exit Debugging	11/21/2014 2:00:24 AM
11	A0-60-01-14/08-00021	akaltenleitner	Debug EAS	11/21/2014 5:37:50 AM
12	A0-60-01-14/08-00021	akaltenleitner	Exit Debugging	11/21/2014 5:41:00 AM
13	A0-60-01-14/08-00021	akaltenleitner	Debug EAS	11/21/2014 5:41:12 AM
14	A0-60-01-14/08-00021	akaltenleitner	Exit Debugging	11/21/2014 5:41:17 AM

EAS event log — Event: Any — Date From 20.11.2014

Every alarm is logged with a timestamp.
This helps finding technical troubles and it helps to see, if a problem has successfully been solved or if another change of settings need to be made.

	EAS ID	Alarm Count	Time
1	A0-60-01-14/08-00021	3	11/19/2014 2:06:12 AM
2	A0-60-01-14/08-00021	1	11/19/2014 11:41:46 PM
3	A0-60-01-14/08-00021	1	11/20/2014 1:01:28 AM
4	A0-60-01-14/08-00021	1	11/20/2014 8:58:26 AM
5	A0-60-01-14/08-00021	2	11/20/2014 11:11:56 PM
6	A0-60-01-14/08-00021	2	11/20/2014 11:12:55 PM
7	A0-60-01-14/08-00021	2	11/20/2014 11:37:30 PM
8	A0-60-01-14/08-00021	1	11/20/2014 11:50:18 PM
9	A0-60-01-14/08-00021	1	11/20/2014 11:51:17 PM
10	A0-60-01-14/08-00021	5	11/21/2014 1:14:53 AM
11	A0-60-01-14/08-00021	3	11/21/2014 1:15:52 AM
12	A0-60-01-14/08-00021	2	11/21/2014 3:31:36 AM

During the online intervention the service operator will see a visualization of the transmitted and receives signals in waves. He can see from this signals if tags in the field or noise from the surrounding is the reason for an alarm. Using this, the operator can remotely configure the transmitter or receiver side for optimal performance.
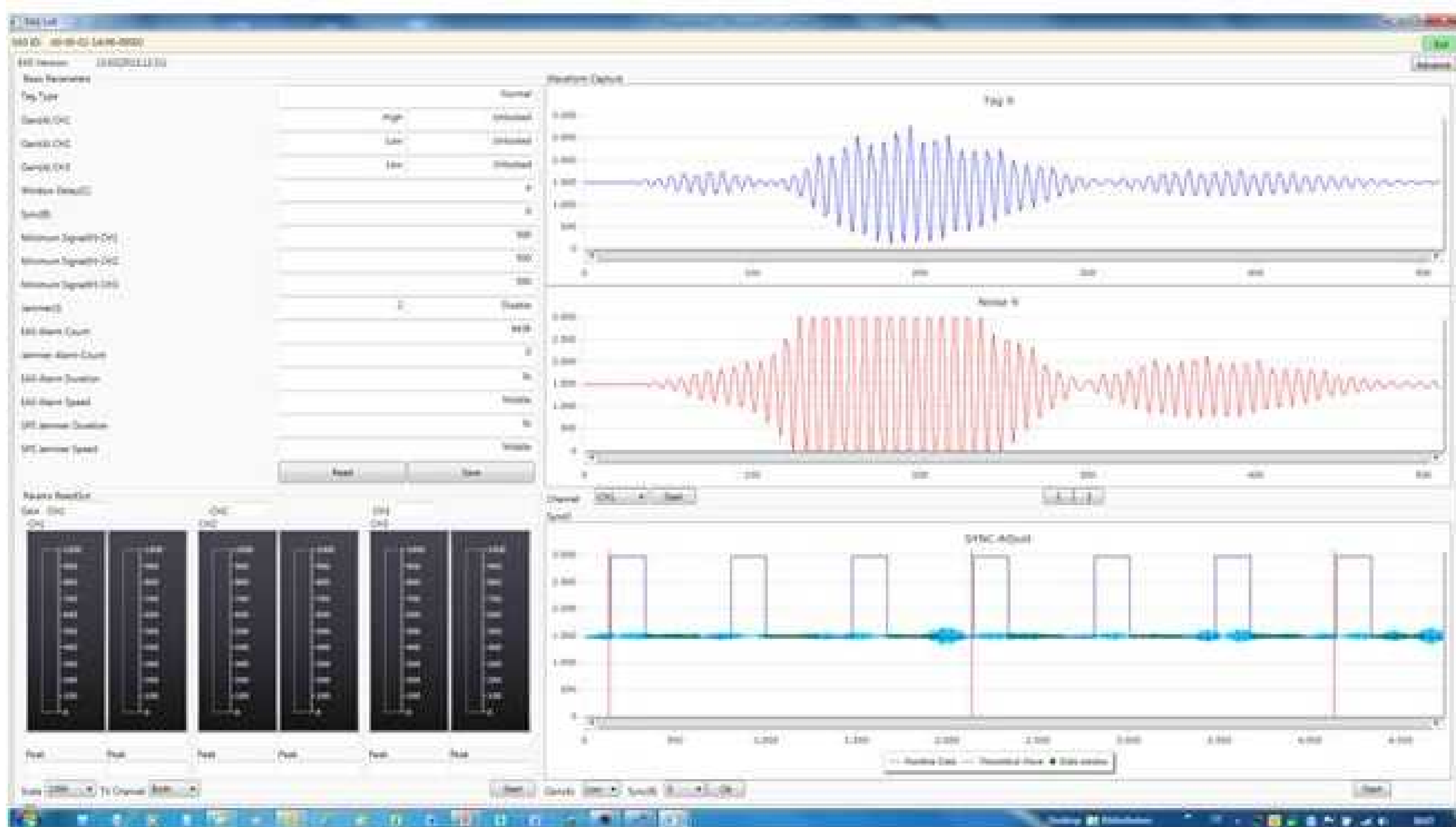
Our support person can analyze the noise signals, he can see if your system is out of synch to other EAS systems in your neighborhood and he can change settings or move the antennas burst on a timeline, to achieve perfect synch again.
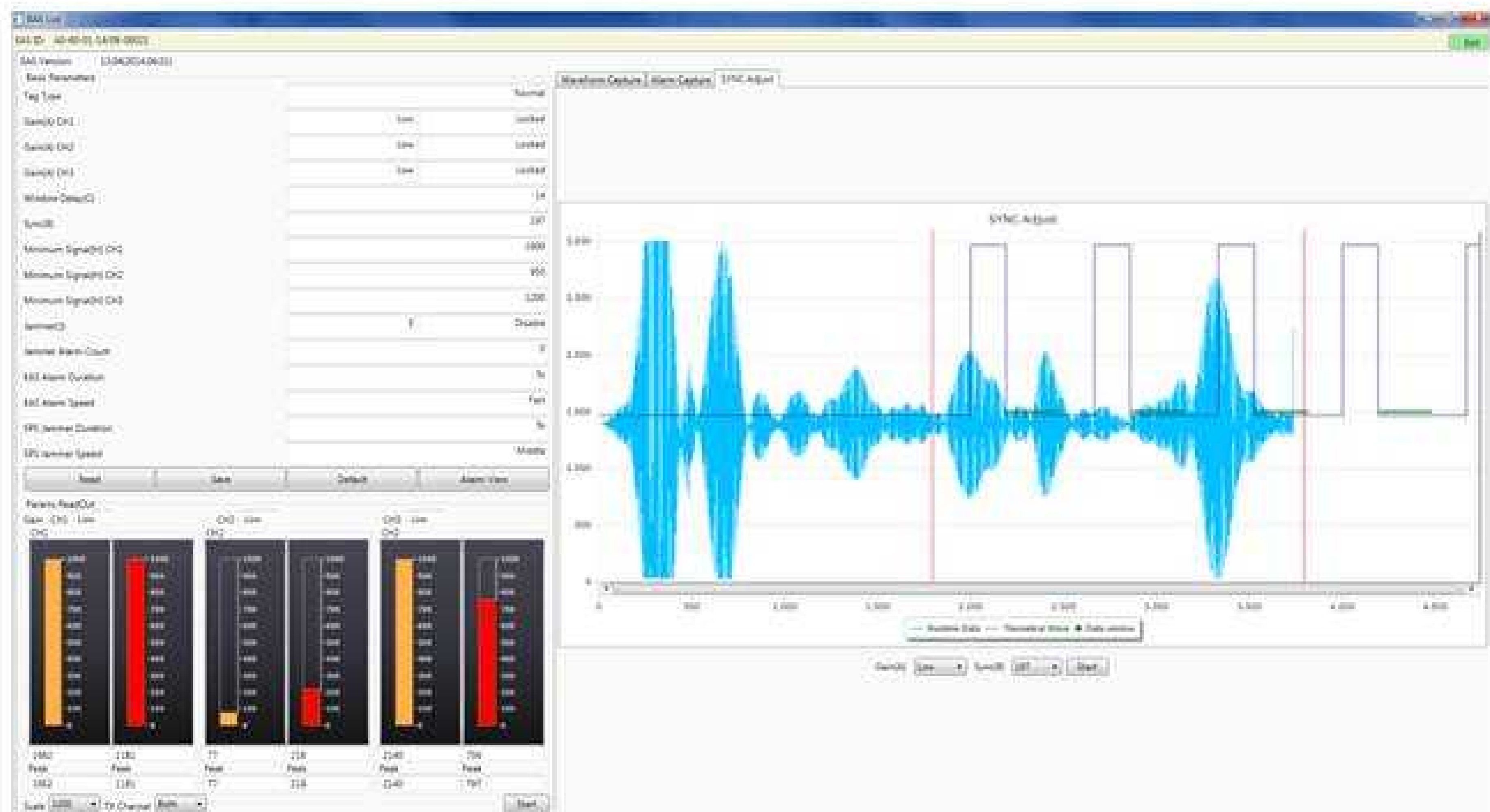
Do we need to consider anything in terms of GDPR?
Absolutely not. By design the system can not collect any personal data. It is not linked to any of your databases. Names, personal information of no kind and no business information about your operation are collected.