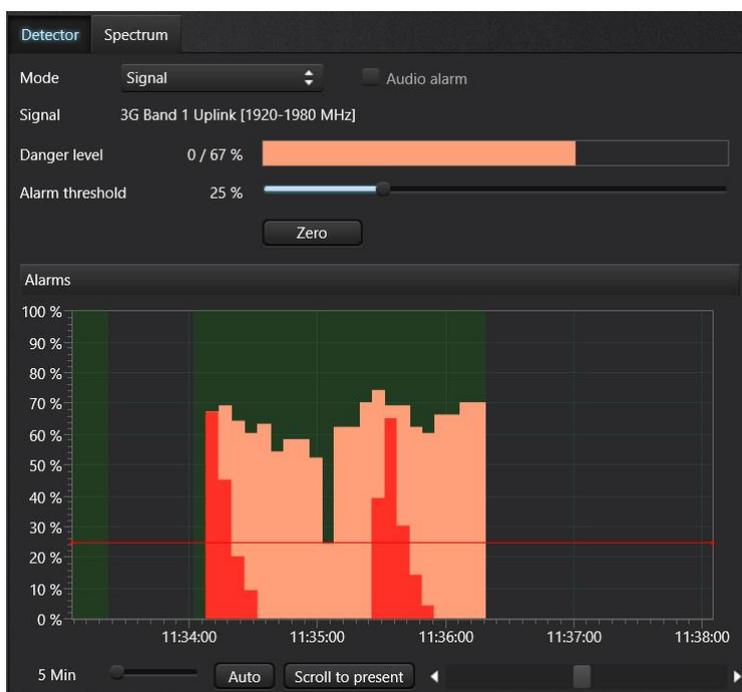# New features of the Delta X, implemented in the updates 2.213 – 2.214

- **Updated "Alarms" graph** can now render two graphs simultaneously: general alarms, and the signal's alarms
- **The Generate Report** feature allows the operator to export the results of detection into a PDF file. The report fully describes the RF environment in the monitored zone by listing dangerous and non-dangerous signals and shows their activity in graphs "Alarms", "Spectrogram", "Waterfall" and "Persistence"
- **Sending alerts by email** makes it possible to send notifications about detecting dangerous signals. The alerting message will contain information about the detected signals in the attached PDF report.
- **The** "**Check for updates**" button has been added. It can check if a newer version is available and download it.
- **Remote access from Windows, iOS or Android**. The method of remote access is described now.

# Detailed description

➢ Updated "Alarms" graph

The "**Alarms**" graph can now render two graphs simultaneously when in the "Signal" mode – these are: general alarms, and the signal's alarms. The general alarms are drawn in light red and reflect the maximum possible danger which exists at each moment. The signal's alarms (shown in darker red) show the level of danger of a selected signal.

➢ Generate Report

The "**Generate Report**" feature allows the operator to export the results of detection into a PDF file. The report fully describes the RF environment in the monitored zone by listing dangerous and non-dangerous signals and shows their activity in graphs "Alarms", "Spectrogram", "Waterfall" and "Persistence".

The function can be called upon from the popup menu in the "Signals" table (right click on a signal).
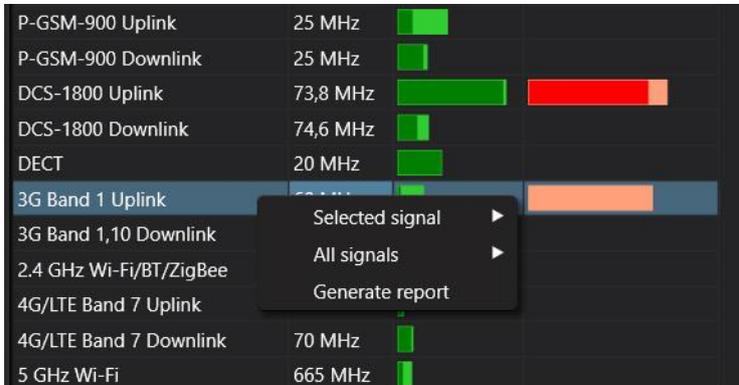
The "**Generate report**" window allows the operator to set the initial parameters of the report.

The '**Report type'** selects the desired type of report:

- **Dangerous signals above alarm threshold**
  - a signal enters this report if its danger level exceeds the alarm threshold during the reported period. Set the alarm threshold in advance to cover more, or fewer, dangerous signals
- **All signals**
  - all signals are listed in the report, including dangerous and non-dangerous
- **Selected signal**
 - just the currently selected signal appears in the report

The '**Reporting period'** makes it possible to set the time interval for the report. By default, the "From" and "To" are initialized to include all detections in the log. The user can change them to a narrower interval in order to focus in on an interesting period.

The '**Add graphs for signals**' checkboxes allows the operator to include graphs for each signal in the report: Alarms, Spectrogram, Waterfall and Persistence. Please note that as drawing the graphs is time consuming, it may slow down the report generation process.

The "**Graphs for new dangerous signals only**" allows the graphs for a limited number of signals only in order to optimize the generation time and decrease the size of file.

After the "**Generate**" button is pressed, the operator is offered to select the destination folder and the file name in the "Save File" window. Press "OK" to proceed.

After the process is completed the report will be displayed in the default viewer.
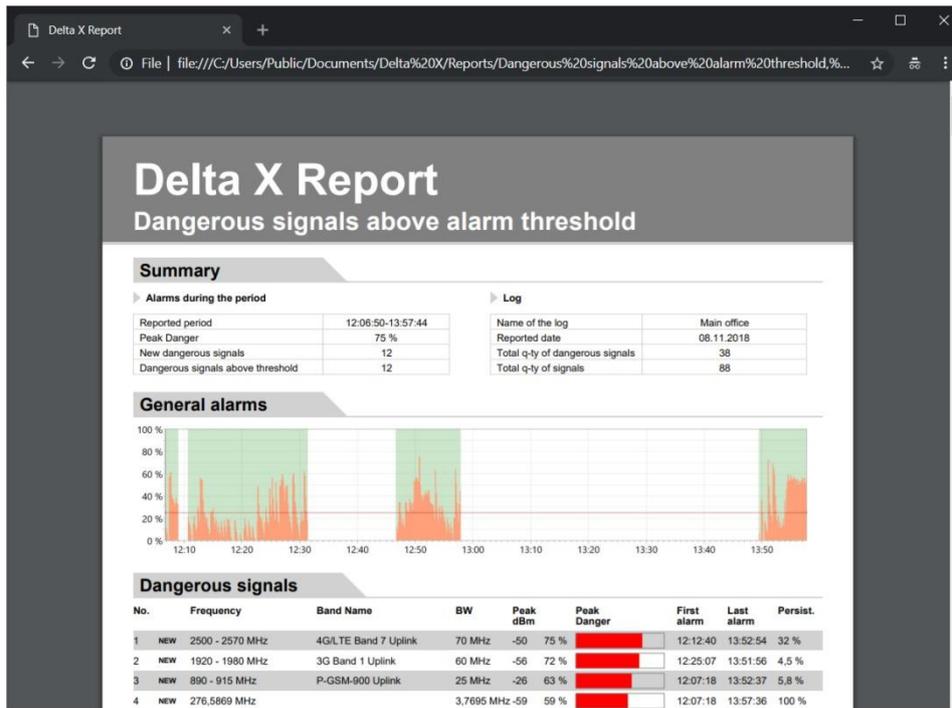
The **header** of the report includes the type of report.

The '**Summary'** section lists some short information about the results of detecting:

- Reported period – the interval included in the report
- Peak Danger – the highest level of danger detected during the reported period
- New dangerous signals – quantity of dangerous signals detected during the reported period which were seen for the first time
- Dangerous signals above threshold – total quantity of signals producing danger within the reported period
- Name of the log
- Reported date
- Total q-ty of dangerous signals – the total quantity of dangerous signals including those not producing danger during the reported period
- Total q-ty of signals – total quantity of dangerous and non-dangerous signals

The '**General alarms'** section shows peak alarms occurring during the reported period from all signals. The graph displays general the RF situation in the guarded area. The depicted scale depends on the reported period.

The '**Dangerous signals'** table lists the signals which were dangerous during the reported period and their attributes:

- The '**NEW'** mark is assigned to a signal which was dangerous for the first time during the reported period
- The '**Peak Danger'** reflects the highest registered level of danger for a signal during the reported period
- The '**first alarm'** is the time when a signal became dangerous for the first time
- The '**last alarm'** is the time of the last danger.
  Please note that the first and last alarms may be outside the reported period if a narrower reported period is selected
- The '**persistence'** shows how frequently a signal was dangerous during the reported period. 100% means constant activity, while a lesser value informs the signal was periodical. Short-time transmitters like remote controls, wireless signals, mobile signals and walkie-talkies may have a low persistence (near 1-2%).

The '**non-dangerous signals'** table is included in the report when the operator selects "All signals".

The following **graphs** are included in the report:

- The Alarms graph displays a signal's level of danger during the reported period. The depicted scale depends on the reporting period.
- The Spectrogram shows the spectrum trace logged at the most dangerous moment, if such danger exists
- The Waterfall shows the period of time around the highest level of danger, if it exists
- The Persistence shows the period of time around the highest level of danger, if it exists

The graphs are added for each signal or just for new dangerous signals according to the parameters being selected in the "Generate report" window.

➢ Send alerts by email

This new feature makes it possible to send notifications about detecting dangerous signals by email. The alerting message will contain information about the detected signals in the attached PDF report.

The message is sent when the level of danger exceeds the alarm threshold continuously for more than at least 10 seconds. The message is repeated every 5 minutes if the level of danger stays high.

The alerting feature becomes active 30 seconds after starting the detecting mode. The pause button allows the operator to adjust the band's thresholds in the beginning to avoid unnecessary alerting messages.

2 additional notifications are sent - when the detection is started and stopped.

The PDF report attached to the alerting message includes the following graphs: Alarms, Persistence and Waterfall. The graphs are added to the new dangerous signals only (marked as NEW).

Since uncontrolled computers are easier to break into, email service providers may not allow the connection of the account to unknown applications. To guard your main email account the Delta X sends messages via a separate "sending" account which has the option to "allow access to less secure apps" to

be turned on. If your "sending" account is hosted by gmail.com, enter its settings and activate the "allow access to less secure apps" option.
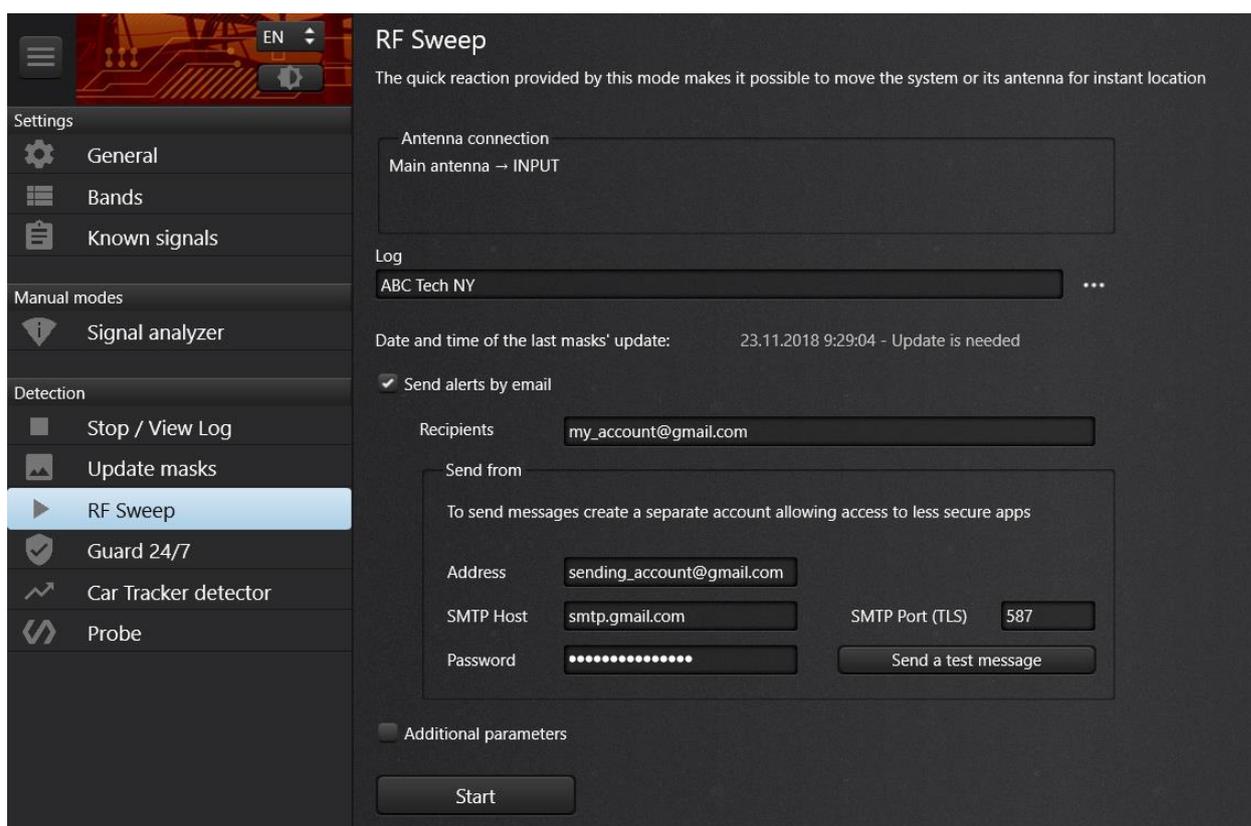
The "**Send alerts by email**" can be activated in the settings of the RF Sweep mode.

Some additional parameters must be entered:

Recipients – receiving email addresses (should be separated by ";" if more than one)

Send from | Address – sending email address

Send from | SMTP Host – name of the SMTP host (smtp.gmail.com for gmail)

Send from | SMTP Port – number of the SMTP ports supporting the TLS encryption (587 for gmail.com)

Send from | Password – password for sending account

Please note that the Delta X stores all entered parameters except the "Send from | Password". Saving the password is omitted for security reasons so it should be re-entered each time the Delta X is launched.

The entered parameters can be checked with the help of the "Send a test message" button. The specified recipients should receive a test message in a few seconds. If the message is not received, check the internet connection and entered parameters.

It is recommended to connect the Delta X computer to the internet via the Ethernet cable to avoid false alarms from the wireless signals.

➢ **Check for updates**

The "**Check for updates**" button is now available in the Settings | General section. If a newer version is available on the web-site, www.sweeping-tscm.com, it will be offered for download. If confirmed, the Delta X software will close and downloading will commence in a default browser. Then, simply start the downloaded setup file.

Setting up remote access

It is possible to control the Delta X remotely using the Chrome Remote Desktop app. The remote device can be another Windows computer, iOS, or Android device.

Both the Delta X computer and the remote device should be logged in under the same google account.

1. Download and install the Chrome browser on the Delta X computer
2. Download the Chrome Remote Desktop app.
3. Next, open Chrome on your computer.
4. In the address bar at the top, type chrome://apps, and press Enter.
5. Click Chrome Remote Desktop 🖥️.
6. Under "My Computers," click 'Get started'.
7. Click "Enable remote connections"
8. Enter a PIN, and then re-type the PIN. Click OK.
9. Click Yes to install the Chrome Remote Desktop service.
10. Confirm the Google Account and enter the PIN again to continue.

Download the Chrome Remote Desktop software onto the remote device from the Play Market (Android), App Store (iOS) or Chrome web store (Windows). Start the software. The computer you previously allowed (i.e. Delta X computer) should show up under "My Computers" on the remote device.