



Press release from ComCom

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Mobile radio frequencies for 5G awarded in Switzerland

The Federal Communications Commission (ComCom) has successfully awarded new mobile radio frequencies. All three current operators, Salt, Sunrise and Swisscom, could acquire a wide range of new frequencies in an auction. These are required for the development of the high-speed 5G mobile radio technology. The proceeds for the Confederation amount around CHF 380 million. The auction took place between 29 January and 7 February 2019.

On behalf of ComCom, the Federal Office of Communications (OFCOM) successfully auctioned a wide range of additional mobile radio frequencies (700 MHz, 1400 MHz and 3500 MHz). The proceeds in the amount of CHF 379'292'728 will go to the federal treasury as extraordinary revenue.

Four companies applied to take part in the auction: Dense Air Ltd, Salt, Sunrise and Swisscom. All applicants were authorised and participated in the auction. While Dense Air Ltd finally abandoned the purchase of frequency, the network operators Salt, Sunrise and Swisscom each acquired a broad range of new frequencies:

Frequencies (FDD/TDD)	Salt	Sunrise	Swisscom
700 MHz FDD	20 MHz	10 MHz	30 MHz
3.5 GHz TDD	80 MHz	100 MHz	120 MHz

Frequencies (supplemental downlink, SDL)	Salt	Sunrise	Swisscom	Not sold
700 MHz		10 MHz		5 MHz
1400 MHz	10 MHz	15 MHz	50 MHz	15 MHz



Five frequency blocks of 5 MHz in the 2600 MHz band and in the 700 and 1400 MHz ranges were not sold. The latter are “supplemental downlink” frequencies that can be used to increase data download capacity in the future. The frequencies that have not been awarded will remain with the Confederation and put out for tender again at a later date.

The companies who participated in the auction must pay the following costs in accordance with the auction results.

	Salt	Sunrise	Swisscom
Amount due in CHF	94'500'625	89'238'101	195'554'002

The frequencies will be assigned for 15 years, giving the operators long-term planning security to develop their networks. The outcome of the auction has been recorded in a decision that is contestable before the Federal Administrative Court.

Fifth-generation mobile communications (5G)

The network operators require the additional frequencies just awarded for the launch of 5G services. The awarding of frequencies is therefore of key importance for the digitalisation of Switzerland, and is in line with the Federal Council’s “Digital Switzerland” strategy. In addition to powerful mobile communications, 5G will enable many new uses in future, including the Internet of Things (IoT), medical applications (eHealth), image processing applications (virtual reality, augmented reality) or self-driving vehicles. Switzerland is one of the first countries in Europe to already provide the 5G frequencies to network operators.

Auction ensures efficient allocation of frequencies

Frequencies are a scarce public resource for which an appropriate price is due in accordance with the statutory provisions. However, the objective of awarding the frequencies was not to maximise auction revenue, but to allocate the frequencies efficiently to ensure excellent mobile communications services for Switzerland.

In the interests of transparency and equal treatment, the frequencies were awarded in a comparatively simple auction format known as a clock auction. This format allowed the bidders to bid on frequency blocks in all the available frequency categories simultaneously (see *explanations in the media background material*).

By incorporating bidding restrictions (“spectrum caps”), ComCom ensured that all mobile operators were able to acquire a wide range of 5G frequencies at reasonable prices.

The auction ran for eight working days altogether. 29 bidding rounds were handled via an electronic auction system from the UK company DotEcon Ltd. This system has already been used successfully by ComCom to award frequencies in 2012, as well as in a number of other countries. The system has special security features and ensures a reliable bidding process via the Internet.



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Enclosures:

- Table of results and frequency configuration graph
- Media background material (6.7.2018)

Further information is available on the OFCOM website www.bakom.admin.ch



Auction results table

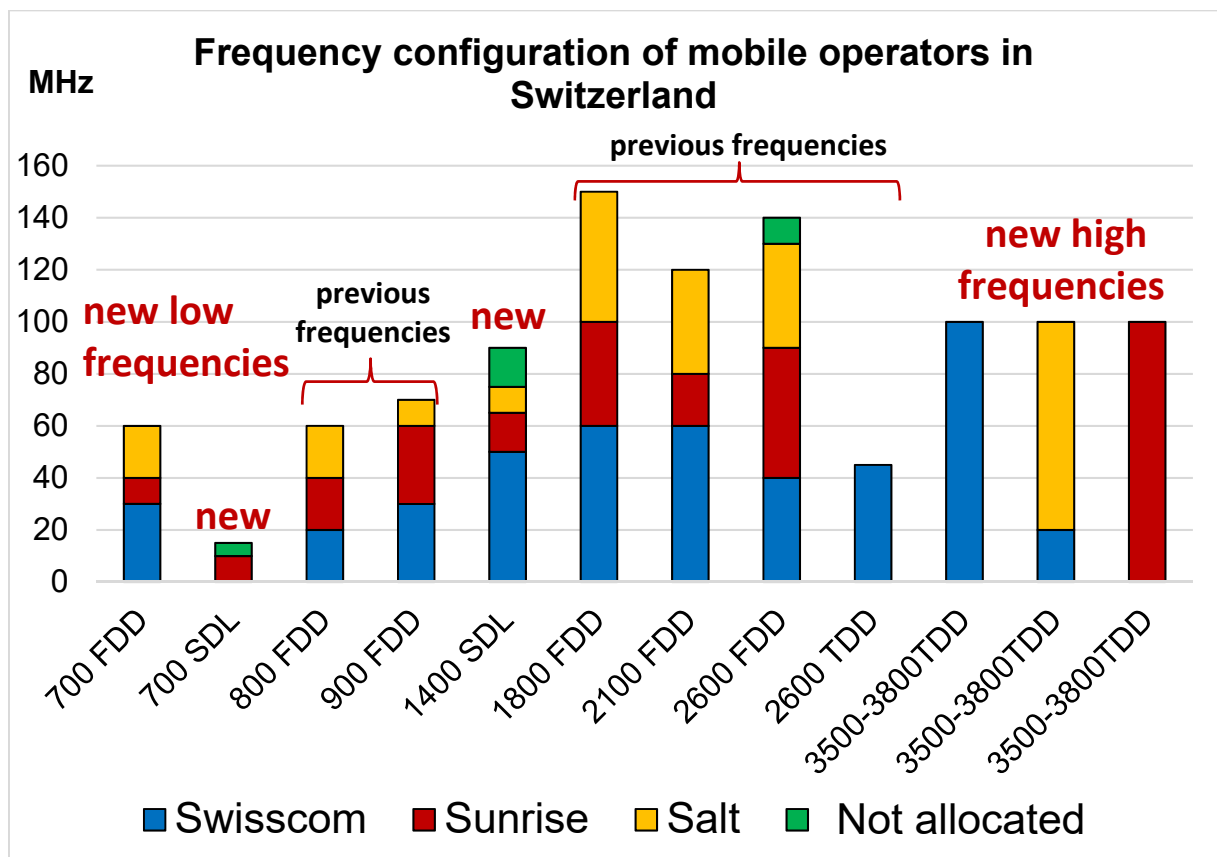
Frequency band	Dense Air Ltd.	Salt	Sunrise	Swisscom
700 MHz FDD	0	20 MHz	10 MHz	30 MHz
700 MHz SDL	0	0	10 MHz	0
1400 MHz SDL	0	10 MHz	15 MHz	50 MHz
2.6 GHz TDD	0	0	0	0
3.5 – 3.8 GHz TDD	0	80 MHz	100 MHz	120 MHz
Auction price	0	94'500'625	89'238'101	195'554'002

FDD: Frequency division duplex => Two radio channels are used for one connection

TDD: Time division duplex => Only one radio channel is used for one connection

SDL: Supplemental downlink => Three radio channels are used for one connection

Graphic: Total frequency configuration of the Swiss mobile operators after the auction *



* Note: The graph shows the number of frequencies, but not the exact location of these frequencies in each frequency band.