

GROUP 4:
DISCUSSION OF FREQUENCY AND
LEGAL REGULATIONS
SURROUNDING A GROUND
STATION NETWORK

5th UNISEC-Global Meeting

MOSTLY USED FREQUENCY

Bands	Uplink, MHz	Downlink, MHz	Typical BW
X	NA	8025 – 8400 (375)	10 – 200 MHz
S	2025 – 2110 (85)	2200 – 2290 (90)	< 1.2 MHz
UHF	401 – 403 (3) 449.75 – 450.25 (0.5)	400.15 – 402 (1.85)	< 100 kHz
Amateur-UHF	432 – 438 (6)		< 100 kHz
Amateur-VHF	144 – 146 (2)		< 100 kHz

↑ X 10 <
↑ X 10

AMATEUR RADIO USE

SATELLITE FREQUENCY COORDINATION IN THE TWO-METRE BAND

13 November 2013

The International Amateur Radio Union (IARU) provides a free frequency coordination service for stations in the amateur-satellite service.

The band 144-146 MHz (“two-metre” band) is allocated to the amateur service and the amateur-satellite service world-wide on a primary basis, with exceptions in several footnotes. This most used of all VHF amateur bands, accommodates weak signal terrestrial and moon-bounce operation, packet radios systems including

APRS, etc.

Accommodating a temporary special need, IARU has extended the same frequency coordination service to experimental stations sharing amateur-satellite service frequencies.

IARU most strongly recommends that satellite builders asking for coordination make sure that their mission fits the definitions of the amateur services.

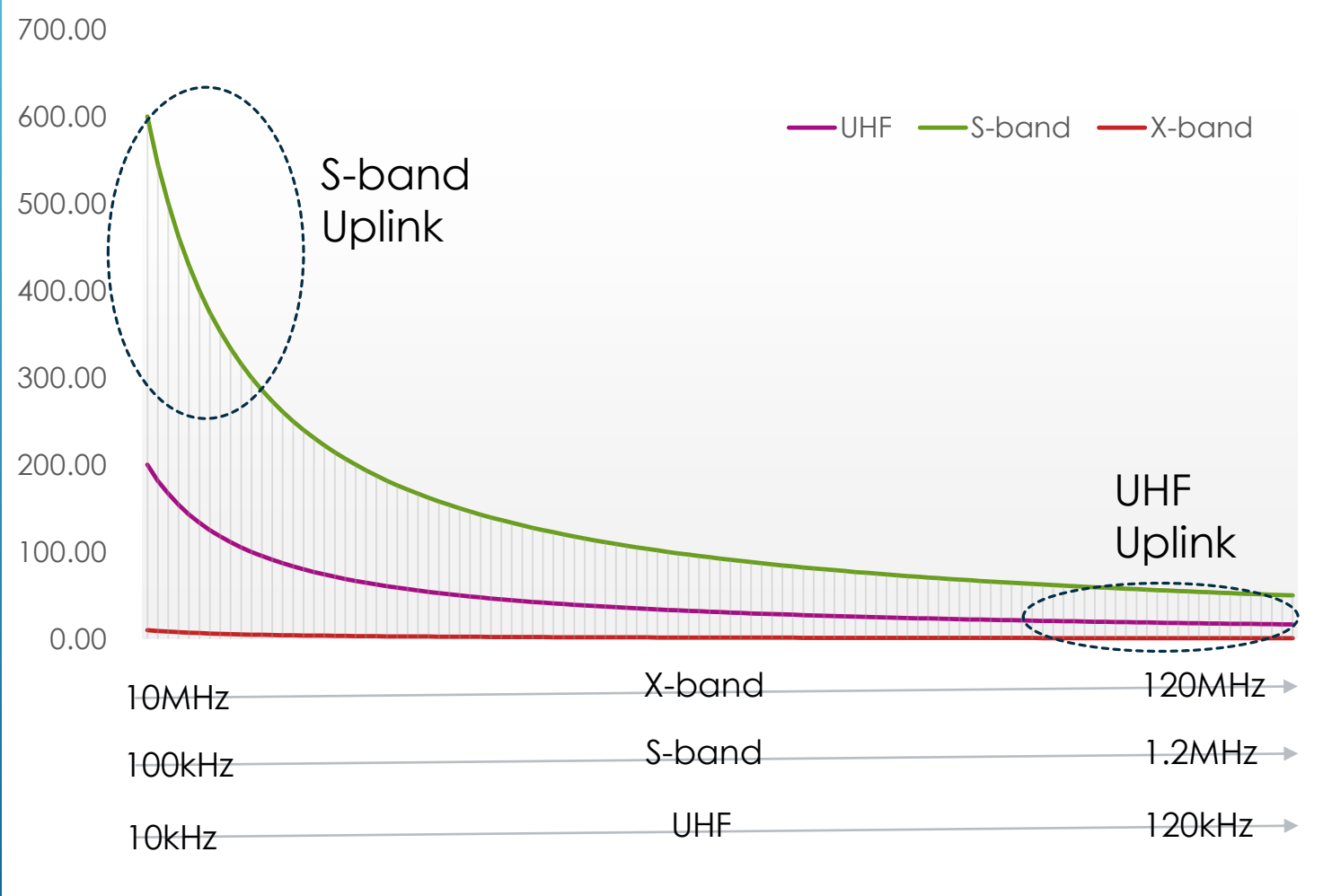
Satellite projects not conforming to these definitions may be returned for reconsideration with a recommendation to look for frequencies allocated to radiocommunication services fitting their mission requirements. Builders are also urged to support work on [ITU Resolution 757](#) in ITU-R Working Party 7B.

Beginning 1 July 2014, IARU will no longer be able to accept frequency coordination requests for experimental stations in the two-metre band.

COMMUNICATION COST (1/2)

GS Type	GS Cost, USD	TLM		CMD	
		k bps(kHz)	Cost/1kbps	k bps(kHz)	Cost/bit
X-Dish	1,000,000	100,000	1	NA	NA
S-Dish	600,000	1,200	500	128	4,680
Yagi	20,000	100	200	64	310

COMMUNICATION COST (2/2)



AGENDA

- ▶ Sharing information and discuss about following topics
 - ▶ Use of Amateur bands
 - ▶ Radiocommunication service
 - ▶ Domestic radio regulations
 - ▶ IARU and ITU coordination
 - ▶ Possible frequency bands
 - ▶ Discuss necessary action to keep frequency allocation for SmallSat community
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