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IRIDIUM PTT

Push To Talk



1. PTT is a new way to use Iridium

Like LMR, UHF, VHF and MF radio services, Iridium PTT is meant to be used frequently. It is designed to allow customers to use Iridium PTT in their daily work routine as much as required without fear of high overage charges.

What do you need?

- Iridium 9575 PTT
(no Upgrade from existing 9575)
- Talk group

2. How to operate?

- The user selects PTT mode from the menu – then ‘pushes’ the button ‘to talk’ to ALL the other users within a talk group
- The button can be depressed for a maximum of 20 seconds allowing that time to communicate your message.
- Using PTT does not require a SIM card, it will use the IMEI number of the device.
- Each device will support up to 15 Talk groups.
- The communication (which is AES256 encrypted) is transmitted across the existing Iridium satellite network.

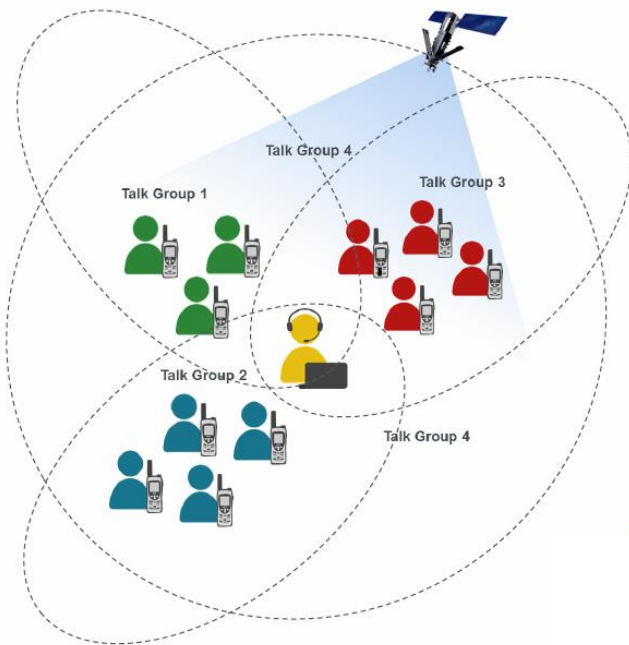
3. Talk groups / Shared Talk groups

- Circular or Square/Rectangular shaped coverage areas are created within the online ‘Command Centre’ by placing on to ‘Google’ maps & choosing your required size. Each shape is known as a ‘region’. A Talk group can consist of one large region or a maximum of 10 smaller regions.
- Circle - minimum region size - 75 KM radius / Maximum region size - up to chosen Talk group size
Square - minimum region size – 150 KM * 150 KM / Maximum region size - up to chosen Talk group size
- A Talk group can consist of one large region or a maximum of 10 smaller regions.
- A Talk group can consist of 10,000 devices, because PTT is a broadband service.

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- The “Trunking” concept inherent in the Iridium PTT service allows a large number of users to share Talk groups.
- Global, Federal and Regional agencies and organizations can respond to events such as emergencies and share Talk groups to communicate.
- Each device supports up to 15 Talk groups.

4. PTT pricing has two monthly fees

4.1.

Phone Charges

- Phones are charged a flat monthly fee regardless of the number of Talk groups defined for the phone or the total usage of that individual phone
- Customers can also add standard voice plans to a PTT phone for an additional fee.

4.2. Talk Group Charges

- Customers purchase a Talk group on a monthly fee, based on the size of the geography they want covered. See matrix below. Larger areas are available but unpublished. They will be discussed for specific partner opportunities
- Each Talk group can have up to 10 separate regions or could be one large region

Talkgroup PTT Area	Area (km ²)	Aproximate Geografic Coverage	Diameter (km)
Small	100,000	Iceland, S. Korea, Kentucky	360
Medium	300,000	Italy, Poland, Arizona	620
Large	750,000	Turkey, Chile, Texas	980
X-Large	1,500,000		
Super	2,250,000		

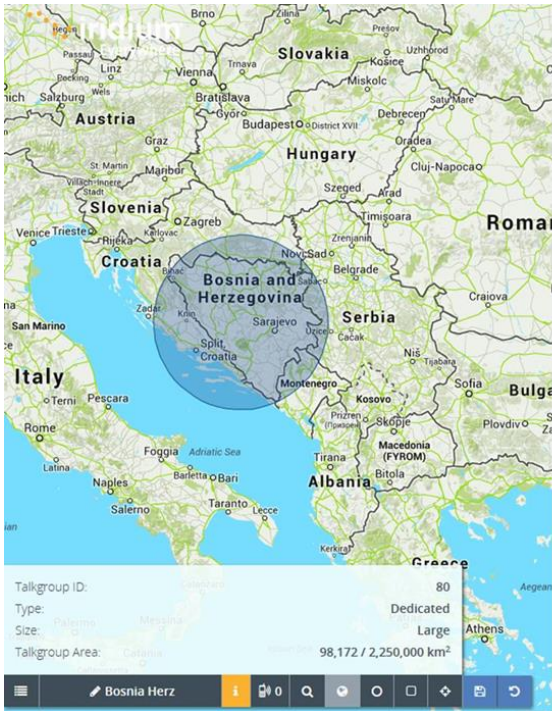
Note: See next pages for illustrated sized of Small, Medium and Large Talk groups

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5. Small Talk group: Up to 100,000 km²



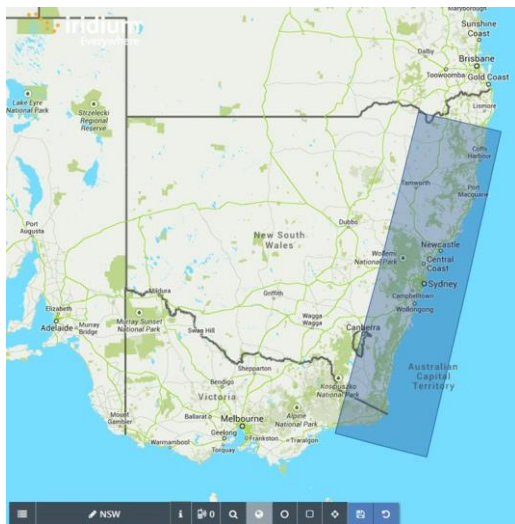
One Region



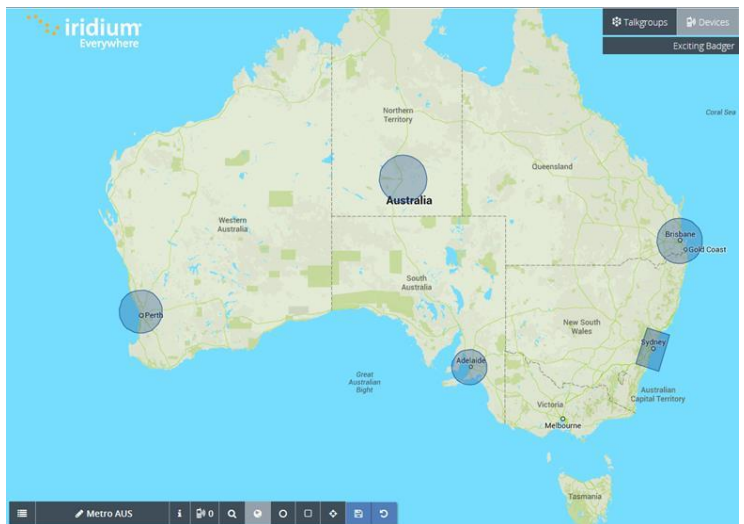
Three Regions

Illustration purposes only: Talk group can be one large region or up to ten smaller regions. This example shows three smaller regions.

6. Medium Talk group: Up to 300,000 km²



One Region



Five Regions

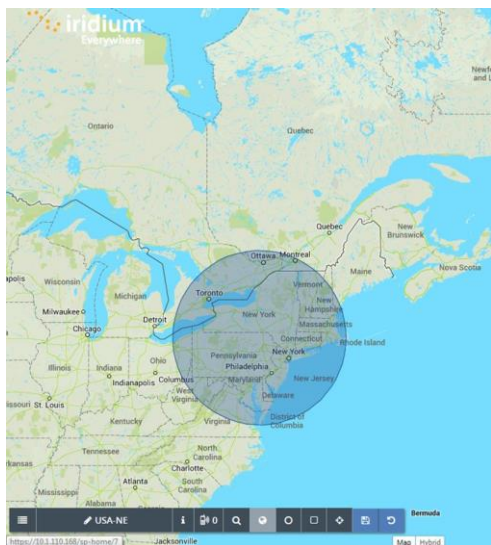
Illustration purposes only: Talk group can be one large region or up to ten smaller regions. This example shows five smaller regions.

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7. Large Talk group: Up to 750,000 km²



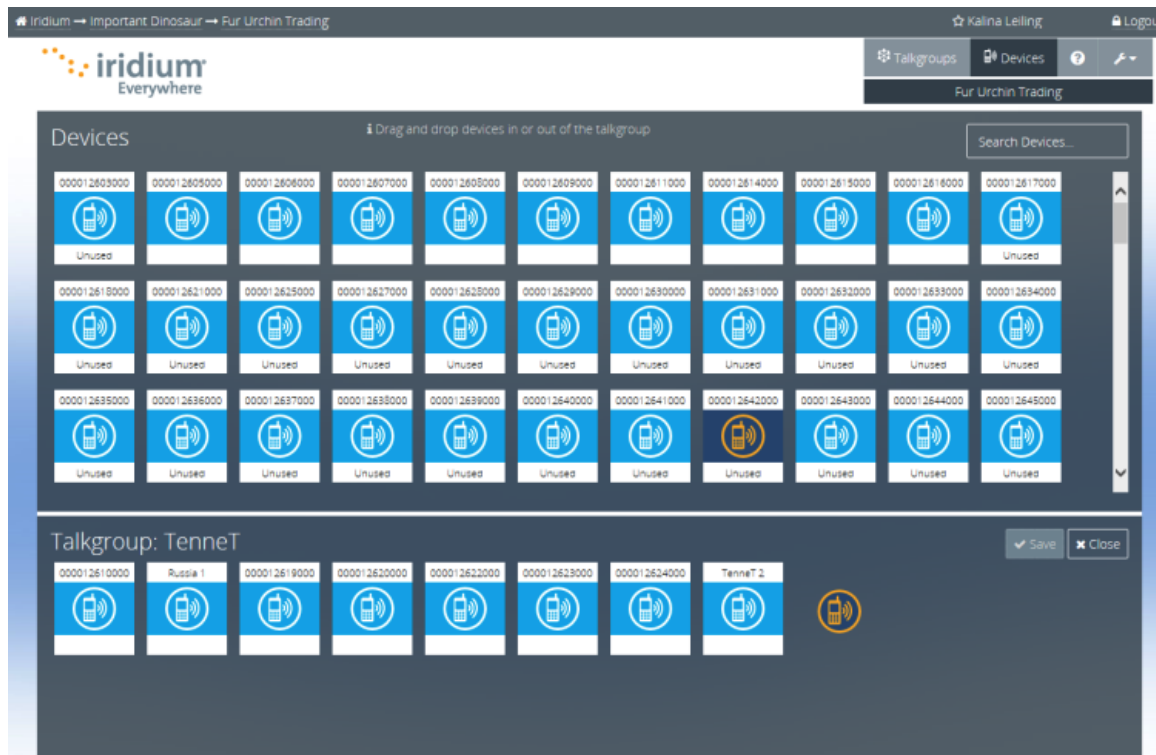
One Region



Ten Regions

Illustration purposes only: Talk group can be one large region or up to ten smaller regions. This example shows ten smaller regions.

After activating your Talk group/s provisioning is set up by you in the Iridium PTT–online command centre. This process is quick and simple to follow using ‘Drag & Drop’ configuration, with fast operation and real time changes.



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8. PTT Pricing Elements

Handset and Talk group size charges are assessed separately.

8.1. Handset Monthly Fees

- Minimum contract period 3 month in tariff plan Global: \$122 which provides unlimited usage of handset for PTT Talk groups.
There are no per-handset usage charges for PTT
- Or with a minimum contract period of 12 month in tariff plan Global: \$82 which provides unlimited usage of handset for PTT Talk groups. There are no per-handset usage charges for PTT
- Minimum contract period 1 month in tariff plan Middle East: \$122.
- Using the Iridium 9575 PTT customers can add on a standard voice plan with current Iridium voice rates, see Appendix A.

8.2. Talk group Charges

- Based on size of Talk group on the previous page
- Usage, calculated in minutes, is defined by the total monthly use of a talk group. In CDR's (CallDataRecord) there is no breakdown to the device level.
- The tariff plan Global is having a minimum contract period of 3 calendar month, the tariff plan Middle East of one calendar month.

Global	Monthly Usage Allowance (minutes)
Size of Talk group	Unlimited
Small	\$ 80
Medium	\$ 80
Large	\$ 480
X-Large	\$ 1,150
Super	\$ 2,500

Middle East	Monthly Usage Allowance (minutes)
Size of Talk group	Unlimited
Small	\$ 520
Medium	\$ 1000
Large	\$ 2400
X-Large	\$ 5,600
Super	\$ 12,800

Definition of Middle East Region, see Appendix B

Billing increment is 20 seconds. Prices are without VAT. You can buy more than one Talk group if need, eg. 2x Small = 200,000 km²

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8.3. Talk group sessions cumulative timing

Session billing increment: **20 seconds**
max. talk time per device/ person: **20 sec** then floor is automatically opened to others
max. session time: **no limit**

1 session = talktime(s)
+ pause time(s)
+10 sec hang up

= usage sum
rounded up to next 20 sec increment
= billing total sum.

Example 1

Handset 1 initiates session	0 sec
Handset 1 speaks 5 sec	5 sec
<u>no other speakers, session release</u>	<u>10 sec</u>
sum	15 sec
<u>total rounded up and billed</u>	<u>20 sec</u>

Example 2

Handset 1 initiates session	0 sec
Handset 1 speaks 5 sec	5 sec
Pause	2 sec
Handset 2 speaks 5 sec	5 sec
<u>no other speakers, session release</u>	<u>10 sec</u>
sum	22 sec
<u>total rounded up and billed</u>	<u>40 sec</u>

9. Example Pricing Scenarios with a minimum contract period of 12 month

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	Firefighters	Police	Disaster Recovery
Handsets	50	10	100
Handset	\$ 82	\$ 82	\$ 82
Monthly Handset Charges	\$4,100	\$ 820	\$ 8,200
Talk group 1			
Size	Small	Small	Medium
Usage	Unlimited	Unlimited	Unlimited
Monthly Charges Talk group 1	\$ 80	\$ 80	\$ 80
Talk group 2			
Size	Small	Medium	Large
Usage	Unlimited	Unlimited	Unlimited
Monthly Charges Talk group 2	\$ 80	\$ 80	\$ 480
Talk group 3			
Size	Medium	N/A	N/A
Usage	Unlimited		
Monthly Charges Talk group 3	\$ 80		
Total Talk group Cost	\$ 240	\$ 160	\$ 560
Total Handset and Talk group Costs	\$ 4,340	\$ 980	\$ 8,760
Average Cost per handset / month	\$ 86.80	\$ 98.00	\$ 87.60

10. Example Pricing Scenarios with a minimum contract period of 3 month

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	Firefighters	Police	Disaster Recovery
Handsets	50	10	100
Handset	\$ 122	\$ 122	\$ 122
Monthly Handset Charges	\$6,100	\$ 1,220	\$ 12,200
Talk group 1			
Size	Small	Small	Small
Usage	Unlimited	Unlimited	Unlimited
Monthly Charges Talk group 1	\$ 80	\$ 80	\$ 80
Talk group 2			
Size	Small	Medium	Large
Usage	Unlimited	Unlimited	Unlimited
Monthly Charges Talk group 2	\$ 80	\$ 80	\$ 480
Talk group 3			
Size	Medium	N/A	N/A
Usage	Unlimited		
Monthly Charges Talk group 3	\$ 80		
Total Talk group Cost	\$ 240	\$ 160	\$ 560
Total Handset and Talk group Costs	\$ 6,340	\$ 1,380	\$ 12,760
Average Cost per handset / month	\$ 126.80	\$ 138.00	\$ 127.60

Prices without VAT

Appendix A

Iridium Postpaid Tariffs

Price in US\$

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Activation fee	\$0,00
Deactivation fee	\$0,00
Voice Mailbox, incoming calls and SMS	\$0,00
Monthly fee for tariff plan Global	\$37,00
Monthly fee for tariff plan Middle East	\$54,00
Calls to fixed and cell phones	\$1,60 / Minute
Voice call to Iridium	\$0,90 / Minute
Data call to Iridium (Direct Internet) / Fixed	\$1,60 / Minute
Iridium RUDICS data call (Circuit Switched)	\$1,60 / Minute
Checking Voicemail	\$0,90 / Minute
Calls to other satellite networks	\$9,95 / Minute
Sending SMS	\$0,50 / SMS
Incoming calls via "Iridium 2 stage dialing access"	\$1,80 / Minute

Billing increment is 20 seconds.

Appendix B

Middle East Region

LAC	Country	Region	LAC	Country	Region	LAC	Country	Region
22623	Afghanistan (Islamic State of)	Quandahar	6195	Gaza Strip	Gaza Strip	22704	Turkey	Erzurum
22627	Jordan (Hashemite Kingdom of)	Al Balqa'	6611	Israel (State of)	Hazafon	22705	Turkey	Tokat
22632	Saudi Arabia (Kingdom of)	Al Qurayyat	6612	Israel (State of)	Hefa	22719	Turkey	Isparta
22647	Egypt (Arab Republic of)	Al Qahirah	6613	Israel (State of)	Hamerkaz	23101	Turkey	Cankiri
22652	Saudi Arabia (Kingdom of)	Ha'il	6614	Israel (State of)	Tel Aviv	23113	Turkey	Canakkale
22653	Kuwait (State of)	Al Kuwayt	6615	Israel (State of)	Hadarom	23122	Turkey	Diyarbakir
22658	Saudi Arabia (Kingdom of)	Ar Riyad	6616	Israel (State of)	Yerushalayim	23130	Turkey	Aydin
22662	Oman (Sultanate of)	Musandam	6635	West Bank	West Bank	23134	Turkey	Icel
22664	Bahrain (State of)	Al Mintaqah al Wusta	22557	Iran (Islamic Republic of)	Khorasan	23151	Iran (Islamic Republic of)	Tehran
22666	Qatar (State of)	Ash Shamal	22568	Afghanistan (Islamic State of)	Faryab	23171	Iran (Islamic Republic of)	Esfahan
22674	United Arab Emirates	Ash Shariqah	22570	Pakistan (Islamic Republic of)	North-west Frontier	23183	Iraq (Republic of)	Karbala'
22675	Pakistan (Islamic Republic of)	Sind	22589	Syria (Syrian Arab Republic)	Hims	23214	Saudi Arabia (Kingdom of)	Ash Sharqiyah
22677	Saudi Arabia (Kingdom of)	'Asir	22592	Iraq (Republic of)	Diyala	23233	Oman (Sultanate of)	Masqat
22679	Yemen (Republic of)	Al Mahrah	22594	Afghanistan (Islamic State of)	Takhar	23287	Yemen (Republic of)	Aden
22681	Saudi Arabia (Kingdom of)	Makkah	22599	Lebanon	Al Biqa'			
22683	Yemen (Republic of)	San'a'	22618	Iraq (Republic of)	Babil			

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