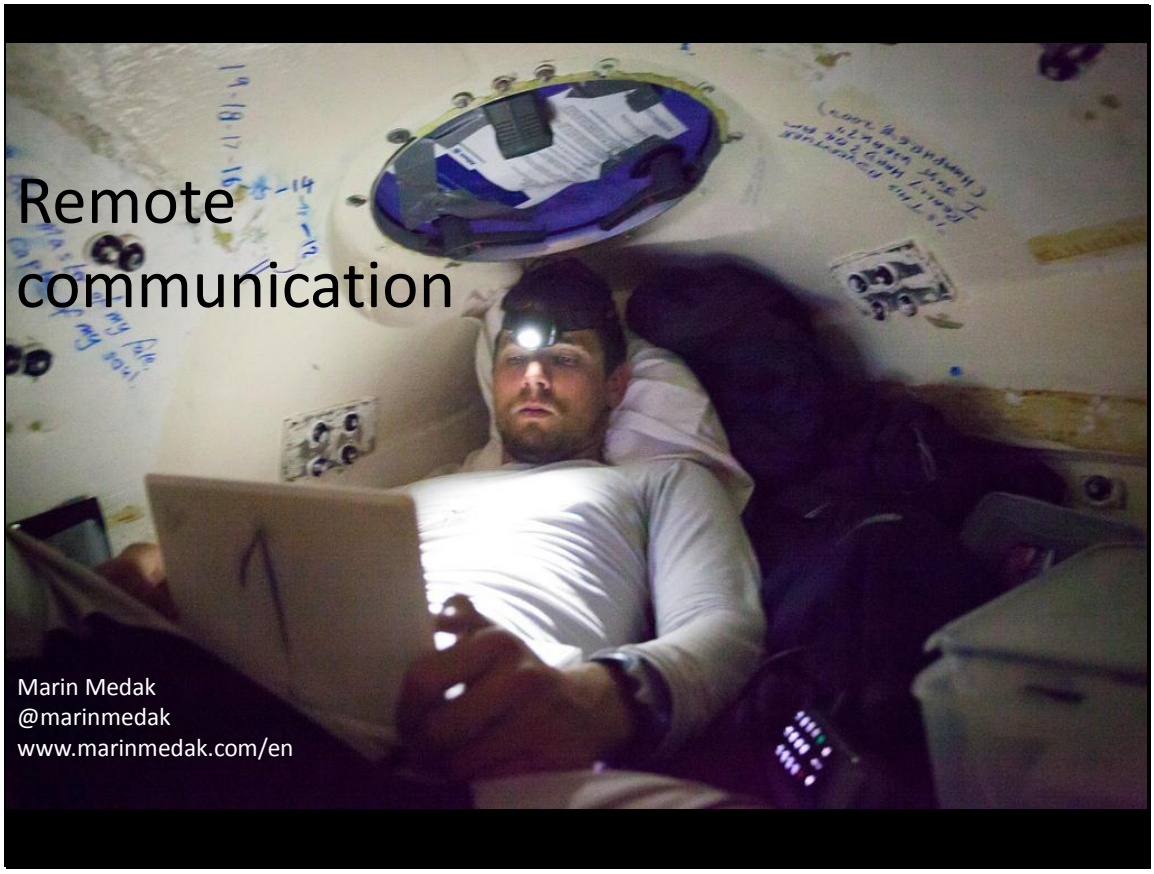
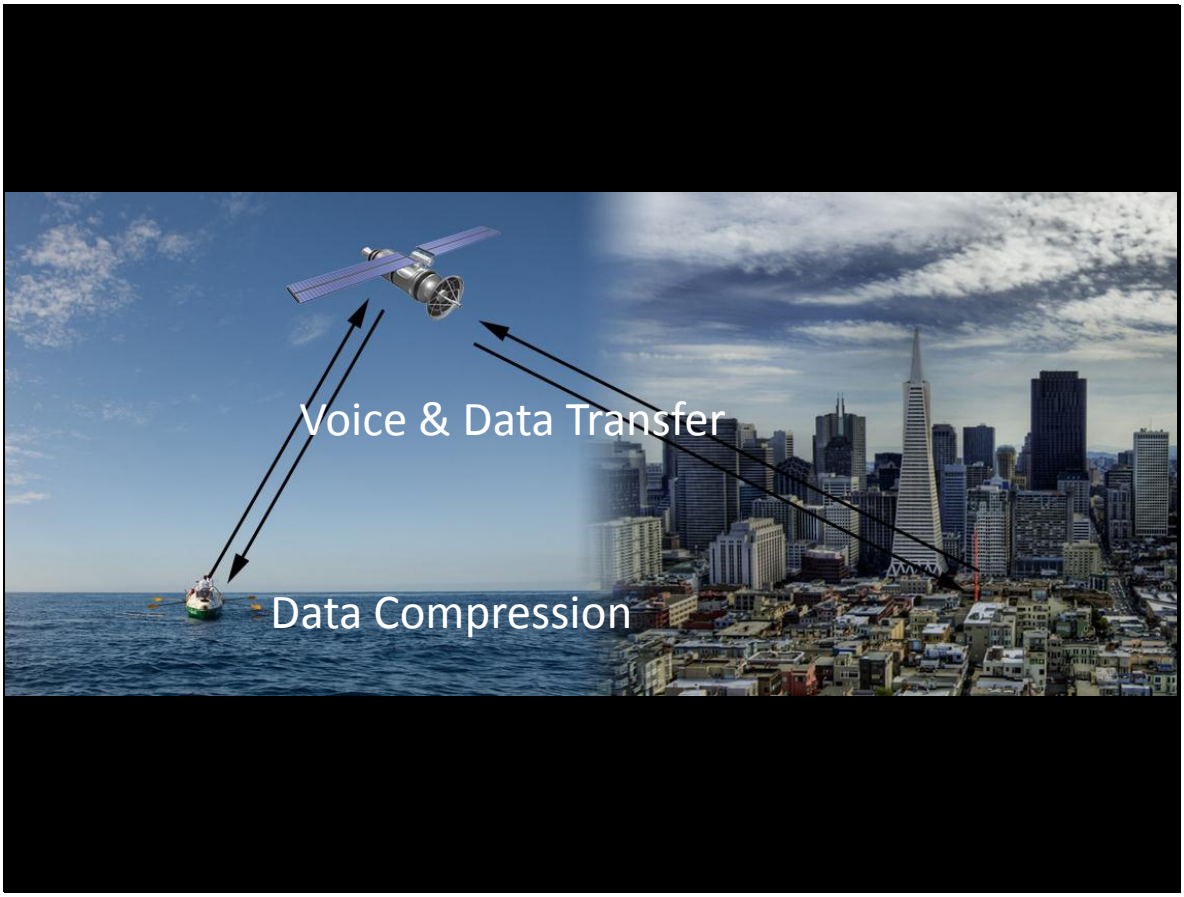

Remote communication
Marin Medak
@marinmedak
www.marinmedak.com/en

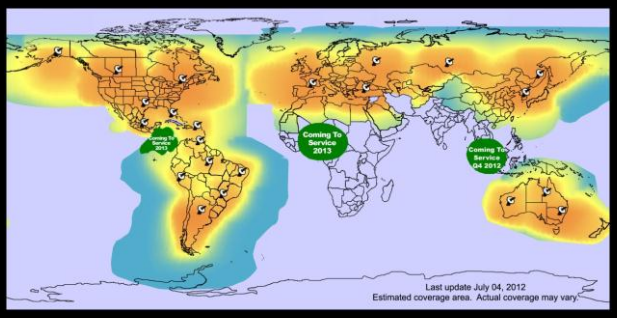


Three important things to think about when communicating from the field:
1. what data you send,
2. what software to use for sending it
3. which satellite network to use.

Different satellite providers have differences in the are they work, sound quality, speed and of course price.

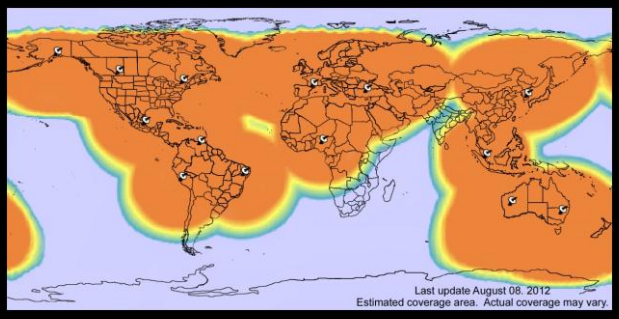
Globalstar

Voice



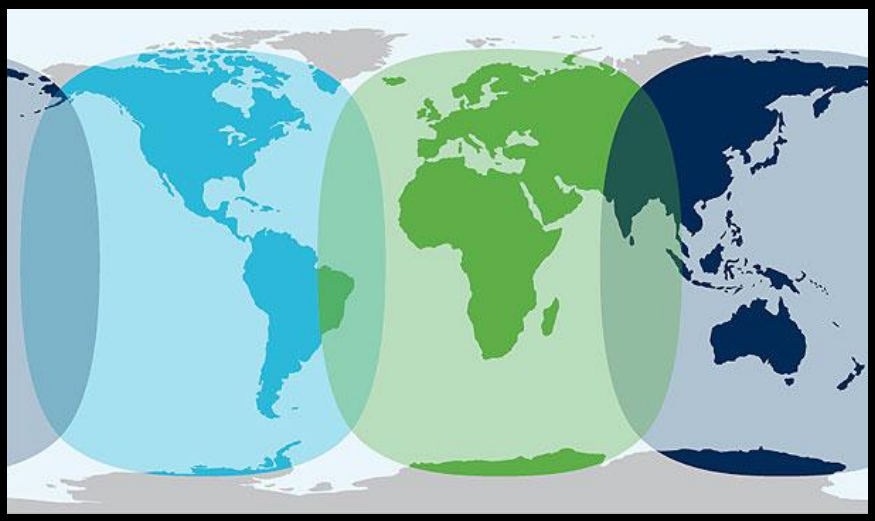
Data

Spot GPS Tracker



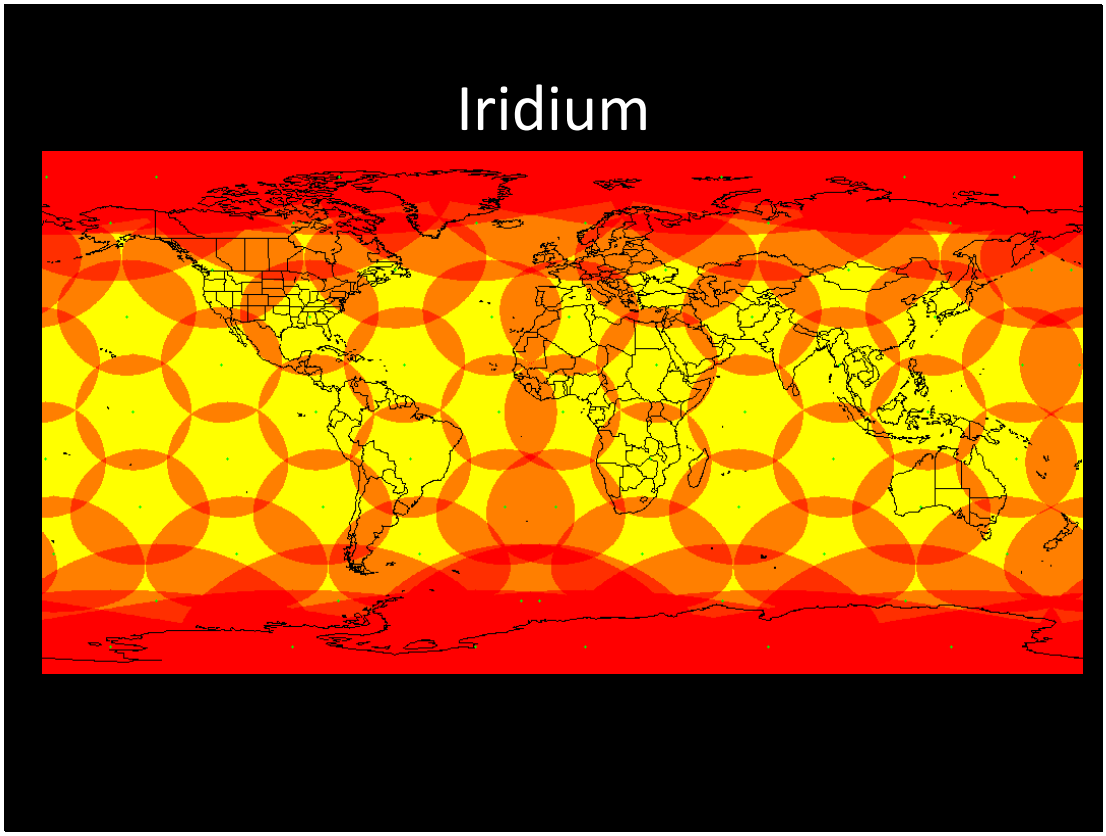
Good for mountaineers, but not for sailors or polar. Spot GPS Tracker works on this network. Slightly better sound quality then others.

Inmarsat



- BGAN
- FleetBroadband

Very reliable British company. Coverage is not global. It works from 76° S to 76° N. FleetBoradband has streaming option for video or other high volume data transfer.



The only global satellite network with global coverage. Low data speed. Doesn't offer streaming option for high volume data transfer. Voice has priority over data. The only option for polar expeditions.

Thuraya

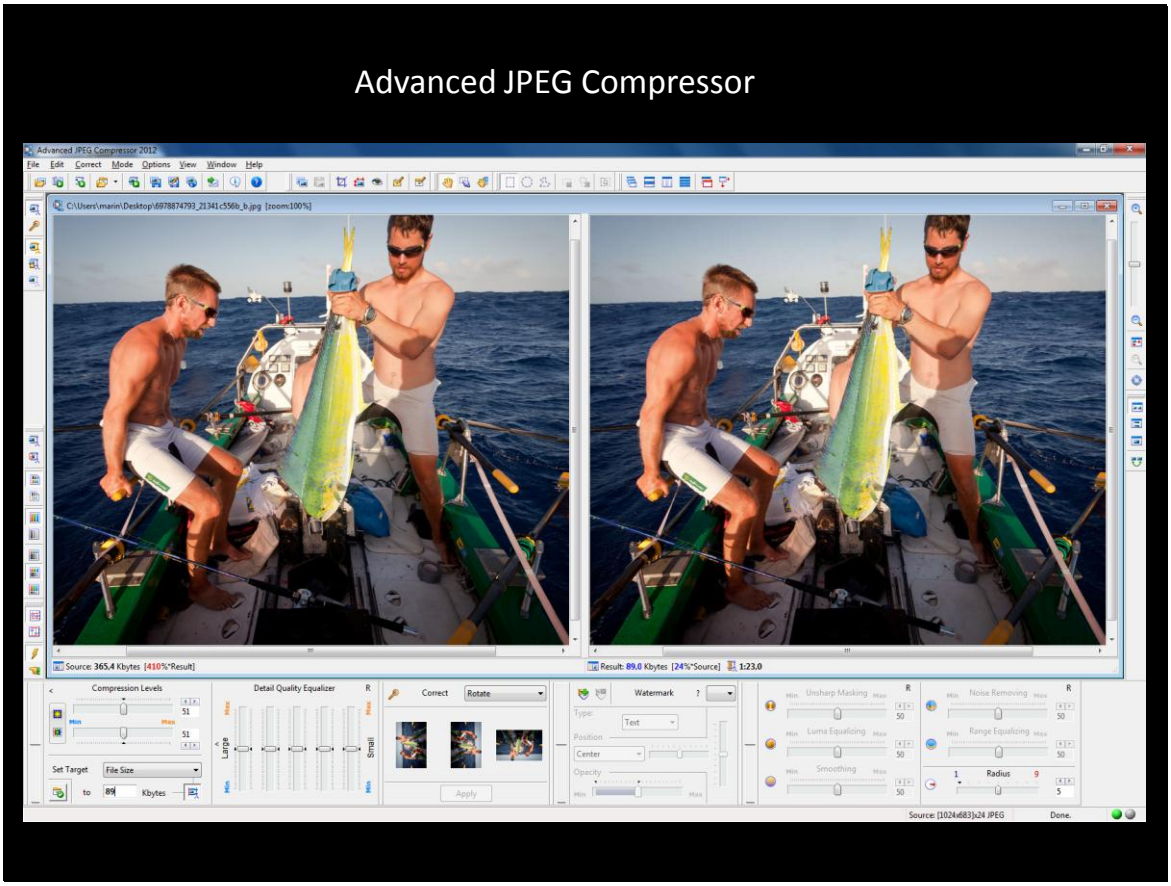
Dual Sim (Satellite and GSM), GPS in all handsets.

	Globalstar	Inmarsat	Iridium	Thuraya
Location	Europe, N&S America, Middle East, Australia, far East	-76° to 76° lat regardless of long.	Global	Europe, Asia, Africa, Australia
Out going call	1-3$/min	0.8-1$/min	1-1.5$/min	1.5 – 5$/min
Data Transfer	Slower	Fast	Slow	Fast
Price per MB	??	??	??	??

To determine which satellite network to use:
Look where you are going and which networks covers that area.
Determine if you are going to send only text and photos or also videos and other high volume data (more then 500kb/day).
Write an estimate of how many minutes you will use per day and how much data (emails, pictures...) will be sent.

Shop around the Internet and look for special deals in stores.
The best deal I've got was on Iridium £0.48/min.

Advanced JPEG Compressor

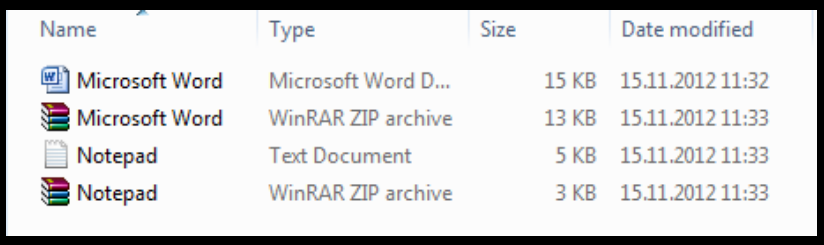


For sending pictures always use an image compression software to resize and reduce the quality. My best advice is Advanced JPEG Compressor, but there are also other good ones. For blogs the longest side of the pictures doesn't have to be more then 500px at the longest side. You can compress it down to 100kB and still have a very good picture. By doing so you can cut the satellite phone bill down by four times.

This picture has a resolution of 1024 x 683px and takes 365 kB.

This is a compressed picture and still has the same size (1024 x 683px), but only takes 89 kB in size.

650 words (A4 sheet)



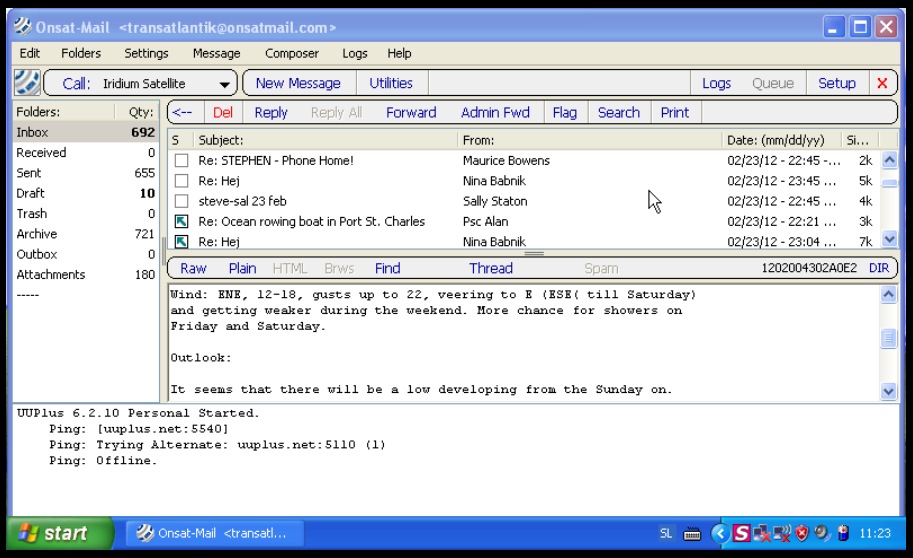
Name	Type	Size	Date modified
Microsoft Word	Microsoft Word D...	15 KB	15.11.2012 11:32
Microsoft Word	WinRAR ZIP archive	13 KB	15.11.2012 11:33
Notepad	Text Document	5 KB	15.11.2012 11:33
Notepad	WinRAR ZIP archive	3 KB	15.11.2012 11:33

Never write the text in Microsoft Word, always use Notepad and then compress it with WinZip or WinRAR.

Compression fork good for pictures and text, but not so much for the video. The videos in MPEG-4 format (taken with smartphones for example) are already compressed, but you can still save 10-20% by using a video compression software.

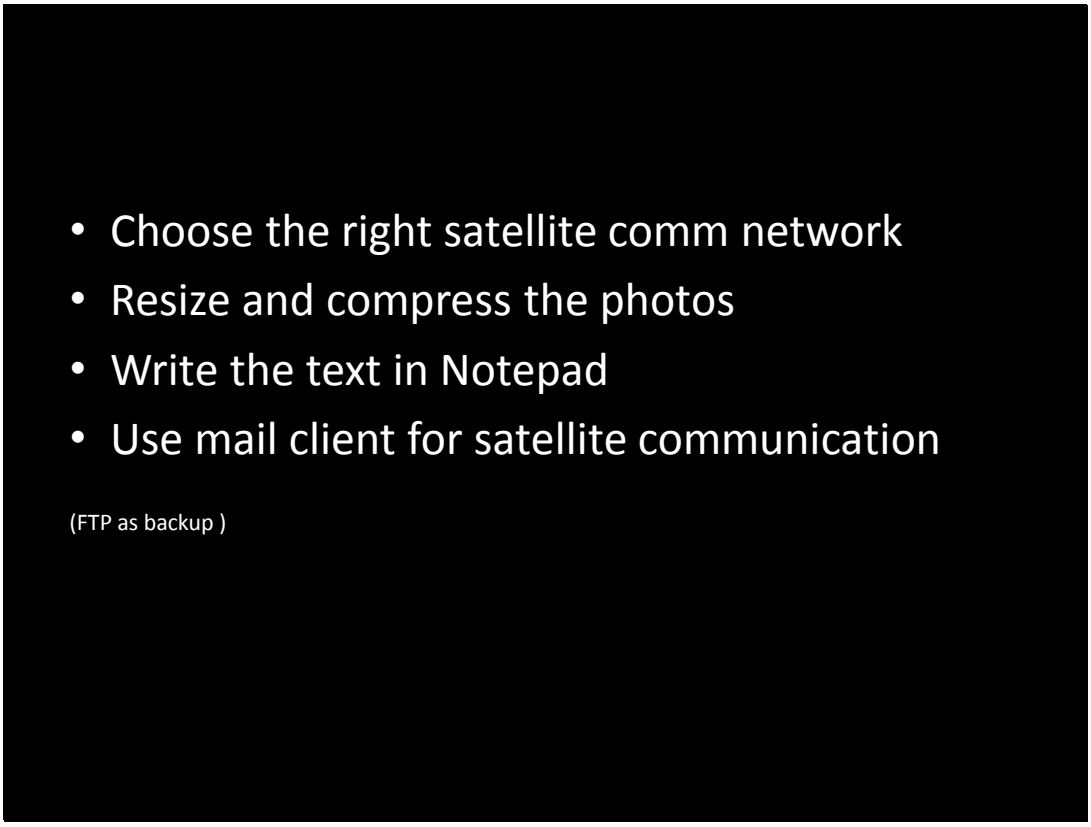
Communication Software

- Sends and receives data simultaneously.
- Resumes at the same point after connection is lost.



It‘s very important that you use the mailing client software designed for satellite communication. Don‘t use Microsoft Outlook or Mozilla Thunderbird. Satellite communication mailing client sends and receives data simultaneously. This can cut your cost as much as half. The other important thing is that if the connection is lost during the transmission, the sending will resume at the point where it was lost and won‘t start all over again.
Mostly shops that sell satellite equipment and minutes also have their own software which is reliable.

I don‘t recommend using satellite software that integrates with Outlook or Thunderbird, as there is one more chance of something going wrong.



Use FTP as a back up plan that works even if your mailing client crashes. But a working salitele connection is still required. Google „FTP explanation“ for more info.

Get in touch for more info or help:
marin [at] marinmedak.com.

Enjoy your adventure!