

Telephone, Internet, Email

Mandatory regulations for the usage of communication services

Keep to the regulations because otherwise consequences under labour law cannot be ruled out!

- only professional or private usage within the frame of family and friends
- no public communication (e.g. press, radio, TV, blogs, internet, etc.), except if authorized by the AWI department of communication & media before the journey
- no microblogging e.g. WhatsApp-groups with members apart from family and friends

Telephone

The ship can be reached by telephone and for data traffic even in polar regions.
Seven lines with the leased line system and 4 lines with Iridium are available onboard.

The leased line is connected to AWI's own antenna in Bremerhaven. The lines go via the AWI telephone system and therefore have the general AWI number in Bremerhaven with respective extension numbers.

Leased line system

One telephone is installed in each of the two telephone boxes (Pantry A-Deck, porter's room E-Deck). These can be used for calling worldwide.

Prepaid-Code-Bons are sold onboard for usage of the telephones. The rate per minute depends on the fees charged by the provider on land. Furthermore 0,60 € per minute (incl. value tax) are charged for the usage of the leased line.

Costs for the card (incl. value tax) for usage of the leased line / Prepaid-Code-Bonus is 12 €.

Receiving incoming calls is not possible on these telephones.

Further telephones are located with the captain and the cruise leader, on the bridge and in the communications office. A telefax is also available.

Iridium

One telephone is installed in each of the two telephone boxes (Pantry A-Deck, porter's room E-Deck). These can be used for calling via Iridium worldwide.

Prepaid-Code-Bons are sold onboard for usage of the telephones. The rates are uniform worldwide.

Costs for the card (incl. value tax) for usage of Iridium / 45-minutes-Prepaidcard (worldwide) 32,75 €

Receiving incoming calls is not possible on these telephones.

Further telephones are located on the bridge and in the communications office.



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Internet

Leased line (VSAT)

Iridium Certus

This system is operable roughly below 75° latitude as it consists of a two antenna VSAT C-band system using geostationary satellites.

Basically, the data volume is unlimited and determined by the usage behaviour of the participants.

The bandwidth is shared between all computers, notebooks and other devices onboard for both crew and scientific members.

Approx. speed:

- 3 Mbps downstream guaranteed (maximum 8 Mbps)
- 1.5 Mbps upstream guaranteed (maximum 5 Mbps)

Internet access is enabled for:

- cruise leader
- several computers in the user room
- captain
- doctor
- system administrator
- communications electronics engineer
- bridge computer for update of nautical charts
- ship's office
- aviation officer
- German Weather Forecast

For using the bandwidth effectively some data-intensive applications are technically limited (e.g. Skype).

This system is operable at all latitudes and will be used in polar regions where the leased line (VSAT) is not available.

A bandwidth of ~700Kbit/s down and ~350Kbit/s up is available. Three Iridium antennas are installed with a monthly data volume of 10GB each (= 30 GB max per month).

The bandwidth is shared between all computers, notebooks and other devices onboard for both crew and scientific members. Download of data of scientific instrument via satellite, forecast data and email traffic are also covered by this bandwidth.

Internet access is enabled for:

- cruise leader
- captain
- system administrator
- communications electronics engineer

For using the bandwidth effectively some data-intensive applications are technically limited (e.g. Skype).

Two especially prepared notebooks are available for internet usage which show the already transferred amount of data and prevent unintended data transfer (automatic updates). The notebooks are handed out by the communications officer who also controls the used amount of data and settles the bill. The network connectors have to be enabled by the system administrator.

Email

A ship's own mail programme exists onboard which can be used for sending and receiving mails. Data transfer takes place every 10 minutes. Attachments can also be transferred but size is limited according to the table on the right side. If the attachment exceeds the limit, you and the sender will be informed. In exceptional cases it is possible to reload the attachment. Alternatively you can configure your own mail programme accordingly. Information about this will be given to you onboard.

The usage of the mailing function is issued by AWI free of charge with an exception for the German Weather Service due to contractual agreements.

Usage of the AWI mail server and the own mail account is only possible from the public internet computers.

Construction of the mail addresses is like this:



Scientific expedition member "Alfred Wegener" receives the address:
AWegener@awi-polarstern.de

Crew member "Hein Seemann" receives the address:
HSeemann.p@awi-polarstern.de

The cruise leader receives the address:
Fahrtleiter@awi-polarstern.de

Iridium:

Data size limitations (see below) are necessary to ensure a smooth data transfer. Extension of the data size quickly leads to reaching the tariff limits and has therefore to be avoided. In case the tariff is exceeded carelessly the additional costs have to be paid by the accountable person.

Leased line:

Limitations suggested here may be adjusted to the conditions on-site after consultation with the leading electronics engineer.

Suggested limitations	leased line	Iridium
Cruise leader	5 MByte	1 MByte
Group leader	2 MByte	100 kByte
German Weather Service	2 MByte	1 MByte
Helicopter crew	2 MByte	100 kByte
Captain	2 MByte	1 MByte
Ship's management	2 MByte	100 kByte
Scientific participants	500 kByte	50 kByte

Intranet

There is an Intranet onboard for data transfer, access to the central storage, using DShip, sending and receiving of Emails etc.. Access is via LAN from the laboratories and chambers (Attention: Bring your own cable!) or via WLAN. Because of the amount of external notebooks and other computers brought onboard there is a risk of computer viruses entering the board IT system. Please contact the system administrator beforehand, if you want to use your own computer within the Intranet.

WhatsApp

Limited use of WhatsApp is possible onboard during operation of the leased line. Text messages may be sent and received. This service is free of charge for everybody onboard. WhatsApp usage is not possible during Iridium operation. Then the technically available bandwidths are reduced strongly and the official communication has priority.

Video conferences

- To attend important calls / conferences it is highly recommend to use the available telephone lines.
Bandwidth/transmission is reserved for those lines and thus independent of vessel's general internet consumption.
Talk to the chief scientist and/or the communication officer if you have important calls in order to reserve phone lines before.
- A video conference system is available in the cinema room on board. To use that please talk to the chief scientist days before and he/she will inform the crew about the necessity.
- Limitations:
 - Video conference can only be provided in regions with stable VSAT connection (see [Internet satellite coverage](#)).
 - Keep in mind that video conferences have a technical latency/delay of >1-2s and consume high bandwidth (50-80% of the vessel's VSAT capacity)
 - Therefore bandwidth for conferences needs to be temporarily prioritized and will then be recuded for all others.
Only the chief scientist can decide about that. Talk to the chief scientist and he/she will inform ship's crew before the event.
Take into account that other clients' traffic needs to be reduced for those hours and/or in worst case alteration of ship's course might be accepted to maintain connection.