


CASE STUDY: MARITIME / OFFSHORE

Live AI Weather Routing over HF Radio

North of the Arctic Circle

How sailor Harley Soltes (LA/KN7H) used SafecomLink to access live AI-based weather forecasts and wind-routing data needed to safely time his Arctic crossing to Lofoten, reaching the open internet and an AI assistant from a boat off the Norwegian coast, with no cellular coverage, no satellite service, and no shore-side infrastructure.

OPERATOR	LOCATION	LINK	SOLUTION
Harley Soltes · LA/KN7H	En route to Lofoten, Norway	Pactor 4 · HF · 14.120 MHz	SafecomLink + Safie AI



The image shows a laptop displaying the SafecomLink Hamradio Edition (V14.1.0) software interface. The interface includes a frequency display set to 14.120.000 MHz, a 'BUSY' indicator, and various control buttons like 'DISCONNECT MODEM', 'TUNE', 'CONNECT', 'ABORT', and 'CALL-OUT'. A log window shows a list of messages with columns for 'Bnd', 'Time', 'From', 'To', and 'Via'. The messages include broadcast messages and a 'NEXT BEACON' at 00:05:43 (ADVANCED). The laptop is connected to an Icom IC-M803 marine HF transceiver and an SCS P4dragon Pactor 4 modem. The setup is on a desk with a red ambient light.

The onboard station: laptop running SafecomLink, Icom IC-M803 marine HF transceiver, and SCS P4dragon Pactor 4 modem

THE CHALLENGE

Reliable information at sea, where every other network goes dark

Sailing north of the Arctic Circle toward Lofoten, Harley faced the offshore communicator's oldest problem: cellular coverage disappears miles from shore, and satellite service is costly, power-hungry, and not always dependable in high latitudes.

For an offshore passage, weather is not a convenience — it is a safety-critical decision input. Choosing the right day to cross, and understanding true wind direction and strength, can mean the difference between a comfortable sail and beating dangerously into the wind. He needed current, trustworthy weather data and route guidance while underway, using only the equipment already aboard the boat: an HF radio and a laptop.

His existing tool for radio email at sea was **WinLink**. It worked, but it offered no way to interrogate the data — only to download static bulletins and hope they were current.

THE SOLUTION

SafecomLink + the Safie AI link over Pactor 4

Harley established a **Pactor 4 connection from the boat to a land station in Austria** (operator Franz, OE3FQU) using SafecomLink Hamradio Edition. From that single HF link he reached the open internet and SafecomLink's **Safie AI assistant**, exchanging real-time questions and answers about his crossing — all over the radio.

"I made a very strong, fast Pactor connection from the boat to a land station in Austria — much farther than any WinLink connection I have ever made."

— Harley Soltes, LA/KN7H

14.120

MHz · 20 m band

Pactor 4

High-speed HF data mode

Live AI

Two-way Q&A, sea to internet

THE CONVERSATION

A live, two-way dialogue — over HF radio

The exchange below was captured live on Harley's screen during the test — a natural, two-way dialogue that turns raw data into a real routing decision.

LA/KN7H — Harley

What are the wind speeds over the sailing passage from Bodø, Norway to Reine on June 4?

Safie AI

Current forecasts indicate winds predominantly from the North to Northeast, 5–15 knots, for June 4, Bodø to Reine. Sea state will be calm to slight. Over.

LA/KN7H — Harley

Thank you. What is your source of wind speeds — is it YR from Norway?

Safie AI

My wind data is sourced from a combination of global meteorological models, including input from national services like YR.no. This provides a comprehensive view. Over.

LA/KN7H — Harley

If I am sailing East to West to get to Lofoten, what day is better for me — Thursday or Friday?

Safie AI

Thursday, June 4th will have N-NE winds, 5-15 knots. Friday, June 5th shows winds generally N to NW, 5-10 knots. Friday might offer slightly lighter winds and better angles. Over.

LA/KN7H — Harley

Thank you for the weather update — your AI link worked terrific. Very fast connection.

THE IMPACT ON DECISION-MAKING

From raw data to a routing decision

The conversation directly informed Harley's planning. He confirmed the wind picture for his East-to-West crossing to Lofoten, verified the data source, and got a day-by-day comparison — concluding that Friday's lighter, more variable winds might offer better sailing angles than Thursday's.

Why the dialogue matters

A downloaded weather bulletin gives you numbers. An interactive AI link lets a skipper verify the source and ask the one question that actually drives the decision — which day do I leave? — all from a boat with no internet of its own.

“This is pretty game-changing — to have fast Pactor 4 communication from sea to a real-time internet AI connection.”

— Harley Soltes, LA/KN7H

SAFECOMLINK VS. WINLINK

Why this proved superior to his previous solution

Where WinLink is essentially a single tool — email over radio — SafecomLink gives the sailor a **full suite of capabilities over the same HF link**: a live AI assistant, bi-directional email, internal Vmail, BBS file access, and station beacons, all in one platform.

CAPABILITY	WINLINK	SAFECOMLINK
Range achieved at sea	Range-limited	Boat → Austria; farther than any WinLink link
Email over radio	Yes	Yes — live, bi-directional email-over-HF
Live AI assistant (Safie)	No	Yes — two-way Q&A
Beacons & live station presence	No	Yes — see who's on air and where
BBS / bulletin & file access	No	Yes — browse & download over the air
Internal Vmail messaging	No	Yes — messages for offline stations
File transfer over radio	Limited	Yes — send & receive files at sea
Breadth of tools for the sailor	Email only	Full suite — AI, email, Vmail, BBS, beacons

“There is email too, as well as the possibility for text networks between boats. I have also used the internal Vmail system to send messages to other stations that are currently offline, to be retrieved later.”

— Harley Soltes, LA/KN7H

THE OUTCOME

Arrived in Lofoten — faster, and more accurate than the apps

After completing the passage, Harley reached out to share the result. The AI-delivered forecast proved more accurate than his usual weather apps for the area, and came back far faster than his previous method — a real-world validation of the link he had tested on the way north.

“Arrived in Lofoten. The AI weather was more accurate than my usual apps for weather. The result via AI is much faster and as accurate as other methods. WinLink would not get you that kind of weather prediction for this area — and it would take an email in, then a second log-in for an email back... if you could make the connection.”

— Harley Soltes, LA/KN7H



SafecomLink

Grid-independent radio data — reliable long-range messaging, file transfer, email gateway, and AI-powered information access when traditional networks fail.

<https://www.safecomlink.com/>

Case study based on a first-hand field report from Harley Soltes (LA/KN7H). Quotes & images used with permission.