



Admiralty Vector Chart Service

...because safety matters



AVCS

ADMIRALTY
Digital Services

What is an ENC?



Electronic Navigational Charts (ENCs) are digital vector charts produced to the International Hydrographic Organization's (IHO's) standards (S57 Version 3.1 and ENC Product Specification). International Maritime Organization (IMO) SOLAS Regulations allow the use of ECDIS to meet carriage requirements for charts if ENCs are loaded and a suitable backup is provided.

An ENC is by definition produced by, or on the authority of a government, authorised hydrographic office or other relevant government institution. ENCs have the following attributes:

- They are compiled and coded according to the standards of the International Hydrographic Organization
- They are referred to World Geodetic System 1984 Datum (WGS84)
- They are regularly updated with official update information distributed digitally
- The ECDIS display distinguishes between ENCs and unofficial data through the continuous display of a warning stating that the mariner should navigate by means of an up to date official paper chart. Also, the boundary between ENC and unofficial data is displayed with a hatched line.

The mariner can further distinguish the status of a particular ENC by interrogating the display to obtain information such as the producing agency code, edition and update numbers.

Hydrographic offices do not take any responsibility for the accuracy or reliability of privately produced, unofficial charts.



AVCS depends on the ENCs provided by hydrographic offices worldwide. The UKHO wishes to acknowledge the ongoing cooperation and professional expertise of these international partners who work tirelessly to make the oceans of the world a safer place.





The Future of Navigation

The Admiralty Vector Chart Service (AVCS) brings together Electronic Navigational Charts (ENCs) from national hydrographic offices around the world and new ENC coverage produced by UKHO on behalf of Foreign Governments to provide comprehensive, official, worldwide coverage.

AVCS contains more directly relevant ENC data than is currently available in any other service.

Compliant

The Admiralty Vector Chart Service only contains ENC data that meets SOLAS Carriage Requirements for use within Electronic Chart Display and Information Systems (ECDIS).

Quality

UKHO is proud of its reputation for the safety and quality of its Admiralty products and the same standards will be applied to all ENC content included within the AVCS service. All cells as a minimum have passed validation checks to ensure that they will load and display correctly on ECDIS equipment. In addition UKHO has instituted a programme of assessment by its professional cartographers where the content of the ENC is compared to the equivalent Admiralty paper chart. Any navigational significant differences identified are then investigated and resolved with the producing nation. Where UKHO believes additional information should be made available to the mariner, it will be displayed through the medium of a value added layer, exclusive to the AVCS service. Although these extra layers will not be available at launch, they will become available in the near future.

No other electronic chart service offers this level of assurance.

Fast and Efficient Chart Maintenance

The Admiralty Vector Chart Service is fully supported by an update service. All electronic charts are up to date at the time of purchase and comprehensive updates are issued every week at no extra cost. Updates include all Notices to Mariners, New Editions and Replacement Charts as well as any new, relevant ENCs, all within the basic subscription price. Updates are available remotely online or via the Weekly Update CD.



Case Study

MV CMA CGM Rose



CMA CGM Rose is a 210m 2,824 TEU container vessel commissioned in 2005, and fitted with Furuno ECDIS. She has been using AVCS for primary navigation since early February 2008, operating the 'epic tour' from ports in India to Northern Europe under time charter to CMA CGM from her owners Reederei Thomas Schulte.

Her Master, Capt. Constantin Zaharia has many years experience at sea and as a college lecturer. He commented, "[with AVCS] you always have the vessel's position against everything around including the targets which is very, very important when you need to make a decision quickly in congested areas... I can tell you that I fully trust the system."



Updating



Remote Updating

The Admiralty Vector Chart Service includes remote updating software free of charge. The software (Admiralty Updating Service or AUS) can be used to obtain immediate updates to your ENC data, either directly over the Internet or by email anywhere in the world at anytime. The service also allows the mariner to actively manage their data holdings enabling the download of voyage-specific updates, minimising transmission costs for vessels at sea. An information log is automatically maintained for the Officer of the Watch to ensure continuity during crew changes. All updates are hosted on a secure server and are encrypted and digitally signed to ensure that they are authentic and uncorrupted when you receive them.

Weekly CD Updates

Updates to AVCS are also supplied weekly on CD as standard. This CD contains updates to all charts in the service, ensuring that every AVCS customer has a complete and up to

date set of data on board, with the option to easily access additional data if required. The remote updating software includes functionality that enables data from the Weekly Update CD to be synchronised with that delivered remotely to ensure complete flexibility and reduced cost.

Digital Catalogue

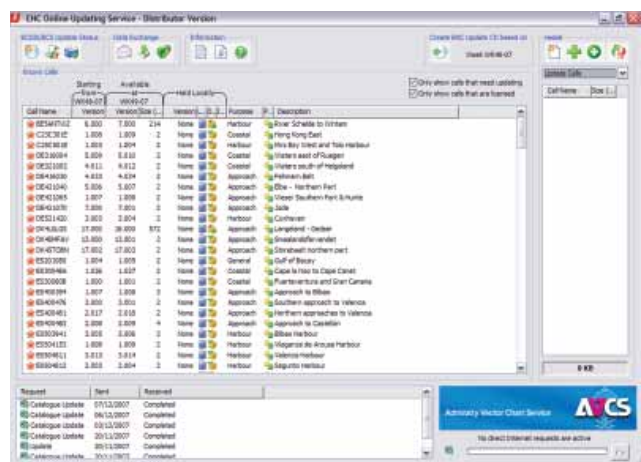
The Admiralty Digital Catalogue is included free of charge within AVCS. It includes the latest information on all Admiralty products and services, from paper charts to AVCS, and assists with Passage Planning and access to product limits and product information by route, area and individual selection. The Catalogue also allows the creation of a product order for onward transmission to your Admiralty Distributor.

The Admiralty Digital Catalogue can be easily updated either online or from the Weekly AVCS Update CD enabling access to the latest information on Admiralty Charts, Products and Services.

Temporary & Preliminary (T&P) NMs

The Admiralty Digital Catalogue also provides easy access to all T&P NMs issued by the UKHO, including a geographical search of NMs.

This ensures that users of AVCS have the most up to date T&P information published for Admiralty chart users, regardless of where in the world they are operating.



Complete Flexibility



Licensing Options

The Admiralty Vector Chart Service offers the maximum flexibility to allow users to match their ENC data holdings to their operational patterns.

AVCS allows users to select any combination of ENC Units and Folios for any available licence period. Wherever ENC producers allow, both Units and Folios are available for licence periods of 3, 6, 9 and 12 months.

Individual Charts

All ENCs in AVCS can be selected on a chart-by-chart basis as ENC Units. These Units are the smallest unit of sale allowed by the ENC producers and usually contain ENC data approximately equivalent to a paper chart.

Folios

AVCS also offers a series of managed Folios, each of which contains all the ENCs required for its defined purpose (e.g. transiting an area).

Any relevant, additional new ENC data that becomes available will be included in the appropriate AVCS Folio at no additional cost for the Licence period, delivering reassurance that the Mariner has access to all the latest information available with no change to budget.

Easy Access to Extra ENCs

Every Admiralty Vector Chart Service customer is automatically provided with a complete set of Base discs containing every ENC available within the Service. Access to ENCs is provided by special 'unlock' (permit) keys, available from your Admiralty Distributor. This allows your vessel to carry complete coverage whilst only paying for the ENCs initially required. Chart holdings can be upgraded quickly and easily at any point during the licence period.



Case Study

MT Supremity



MT Supremity is a James Fisher Everards oil product tanker commissioned in late 2007 and fitted with dual SAM Electronics ECDIS systems. She has been using AVCS since January 2008, operating in Northern Europe (primarily UK and Irish waters).

Captain E.W. Lyons, Fleet Operations Director of James Fisher (Shipping Services) Limited said, "As with all other innovative solutions provided by UKHO, we have been impressed with the system and the benefits that can be derived from its use."



Folios

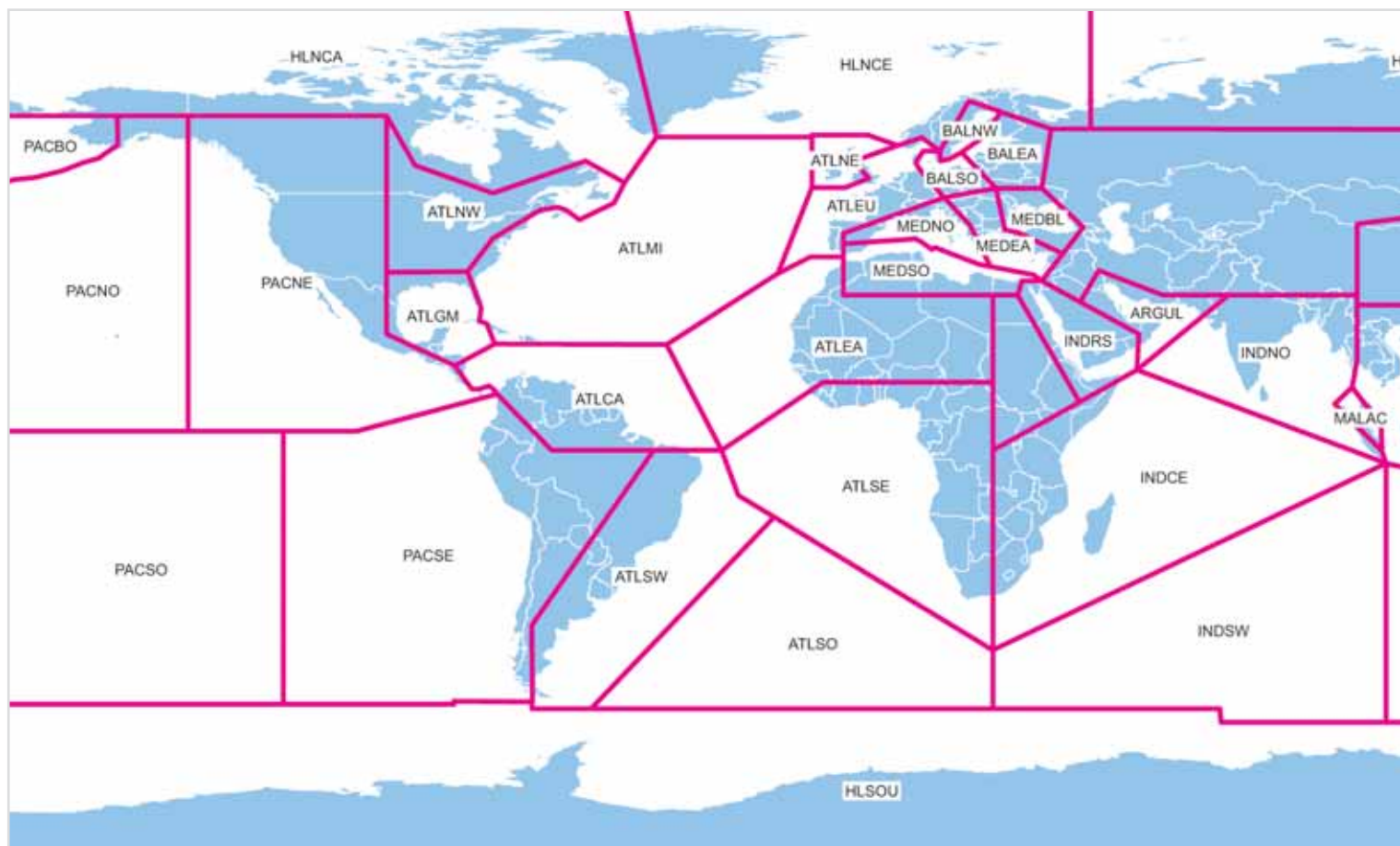


The Admiralty Vector Chart Service is also available in a series of Folios designed to make ordering, maintenance and flexible licensing as easy and simple as possible, whilst minimising the purchase of redundant data. Folios also allow the UKHO to automatically add new ENC's to holdings as soon as they become available, providing certainty that you always have the latest available data within the service at your chosen level of coverage.

A folio is a geographic collection of ENC's at specific scales or usage bands, designed to meet specific operational requirements, from safely transiting an area to approaching and entering a destination port.

Folios can be supported by Individual ENC's where required.

There are three types of AVCS Folio:- Transit, Regional and Port.



AVCS Transit Folios





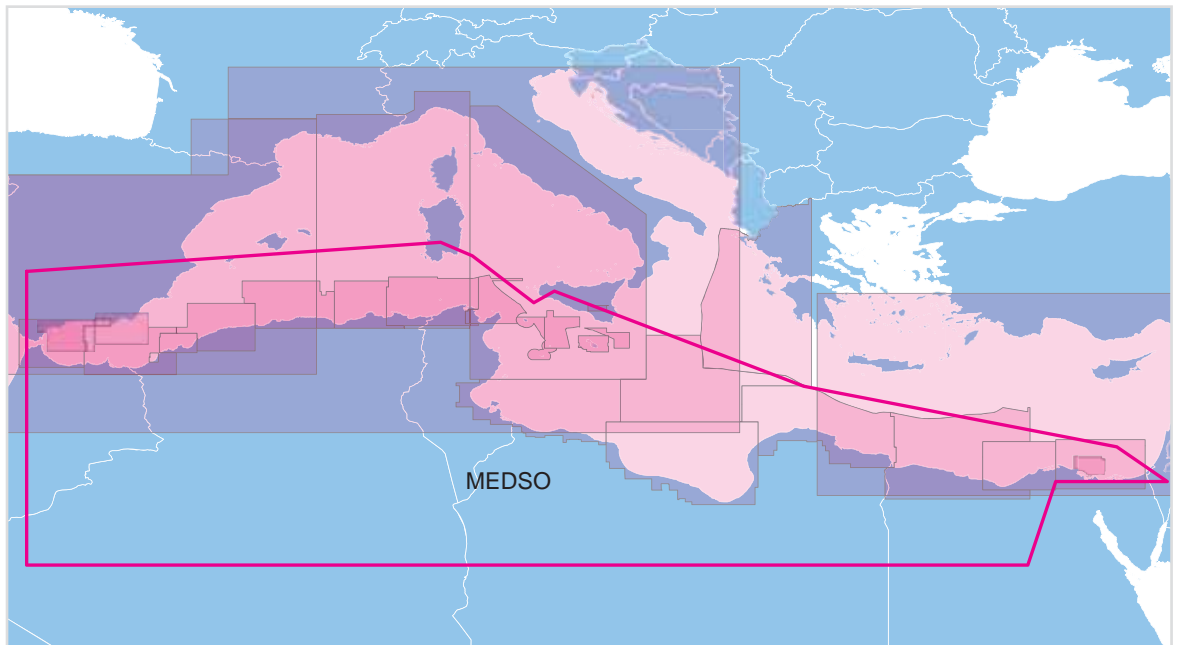
Transit Folios

Transit Folios are designed to provide all the coverage needed for a vessel to pass safely through a region when not engaging in local trade.

The folios are schemed to provide coverage along the major trade routes without the need to purchase data for less frequently visited areas. Transit Folios contain predominantly Overview and General ENC coverage, with Coastal

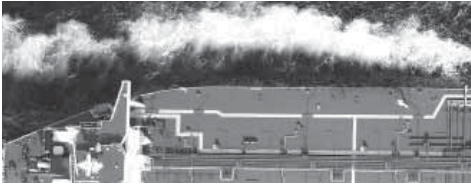
coverage where appropriate at selected choke points, capes, straits and convex coasts.

Transit Folios save operators the expense of purchasing detailed coverage for regions that they are just passing through, whilst including more coverage to negotiate the choke points such as the Suez Canal and Malacca Straits.



Example of a typical Transit Folio





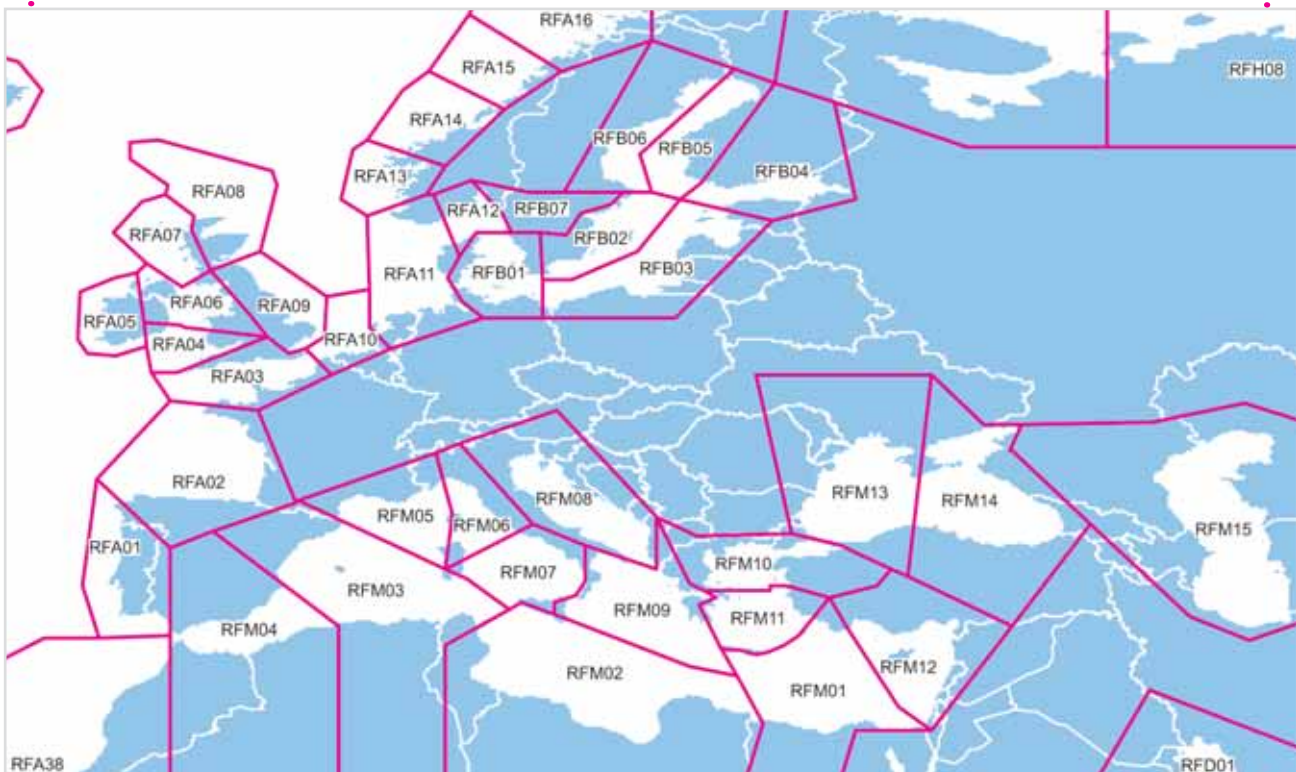
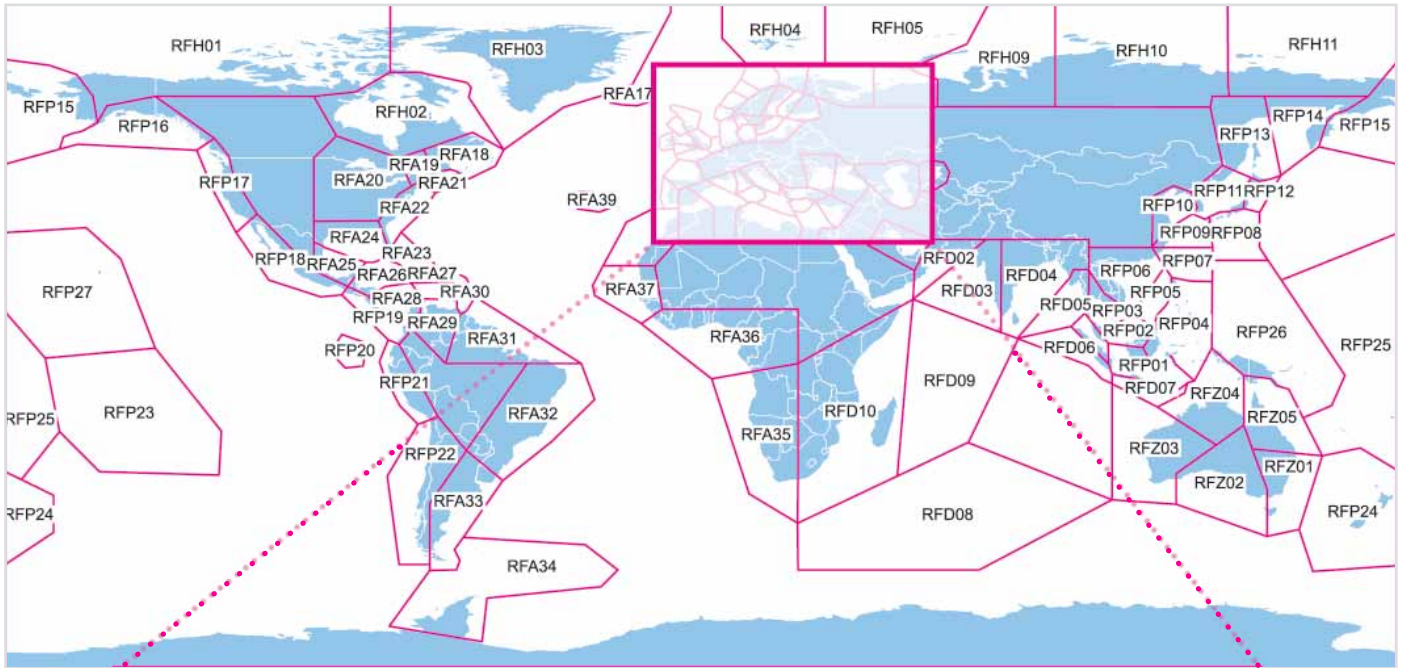
Regional Folios

Regional Folios cover a much smaller geographical area than Transit Folios and include all Coastal and some Approach ENC's, where coastal coverage is not available.

Regional Folios are designed for local and coastal trade, where more detailed coverage of complex coastal waters is required.

They do not include Port Approaches or Entry.

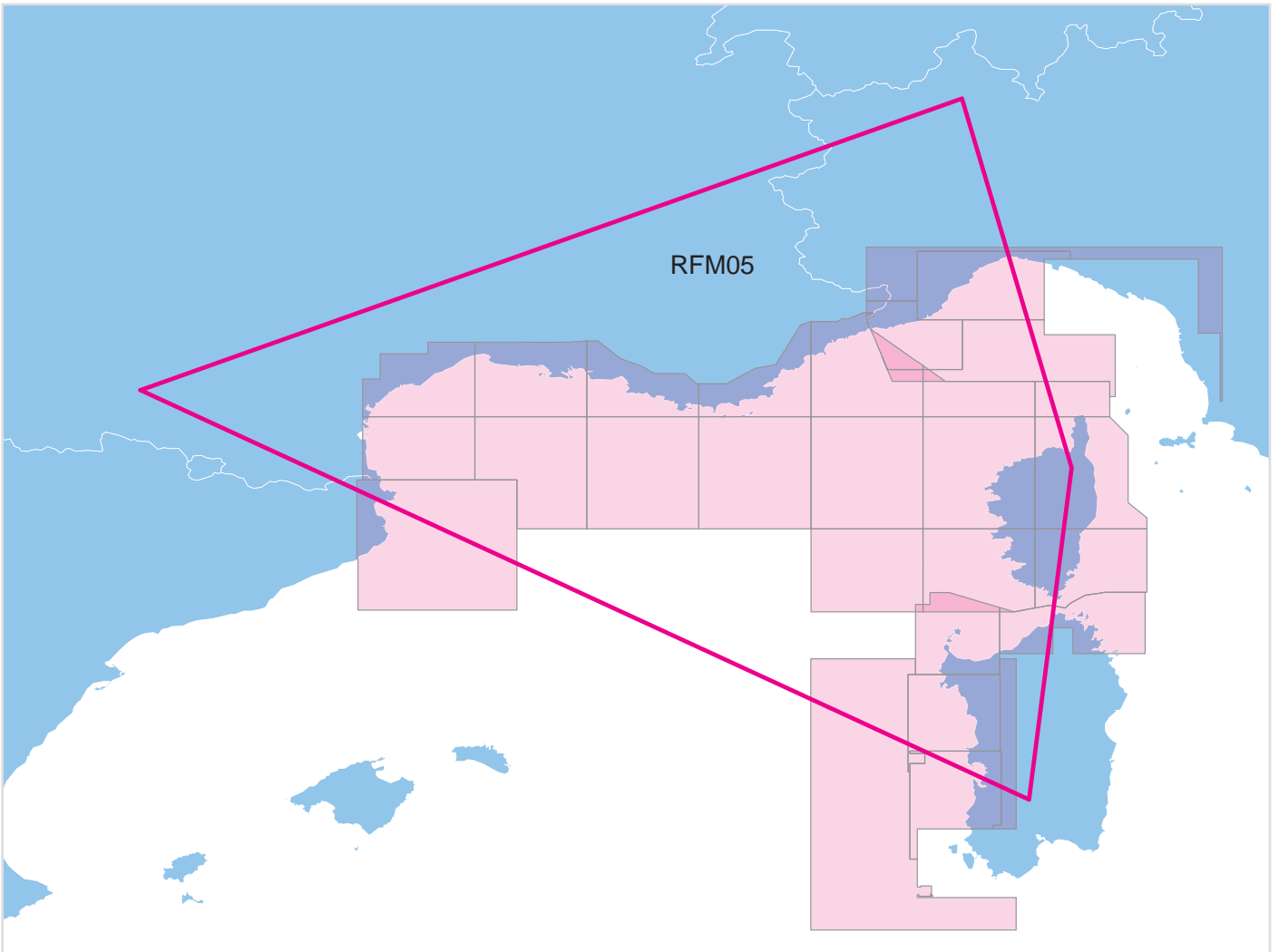
For an up to date list of available Folios please contact your Admiralty Distributor or visit www.ukho.gov.uk



AVCS Regional Folios



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Example of a typical Regional Folio



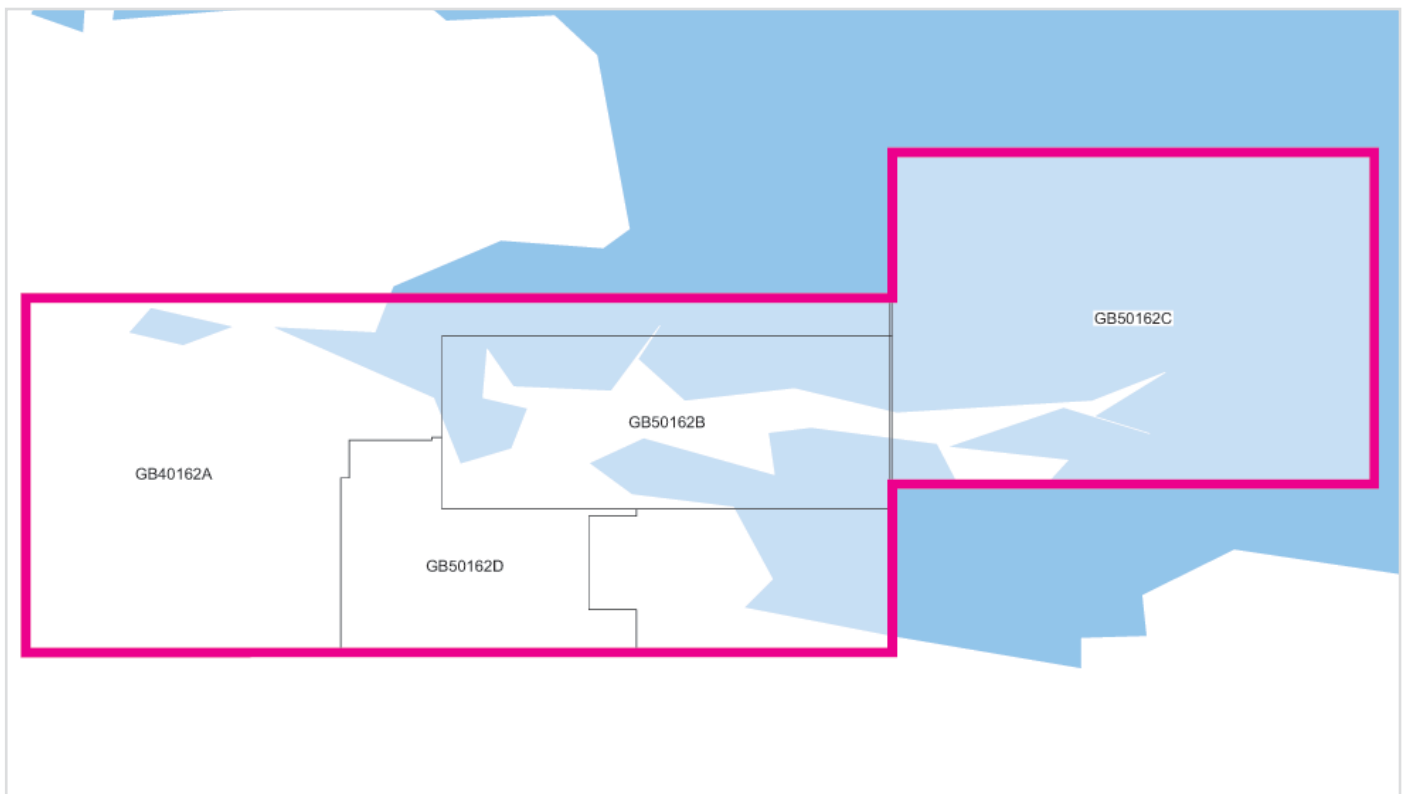


Port Folios

Port Folios contain detailed coverage of the world's top ports and include all ENCs necessary to enter a port safely and with complete confidence. They comprise Approach (Band 4), Harbour (Band 5) and Berthing (Band 6) cells grouped together into a single sales unit.

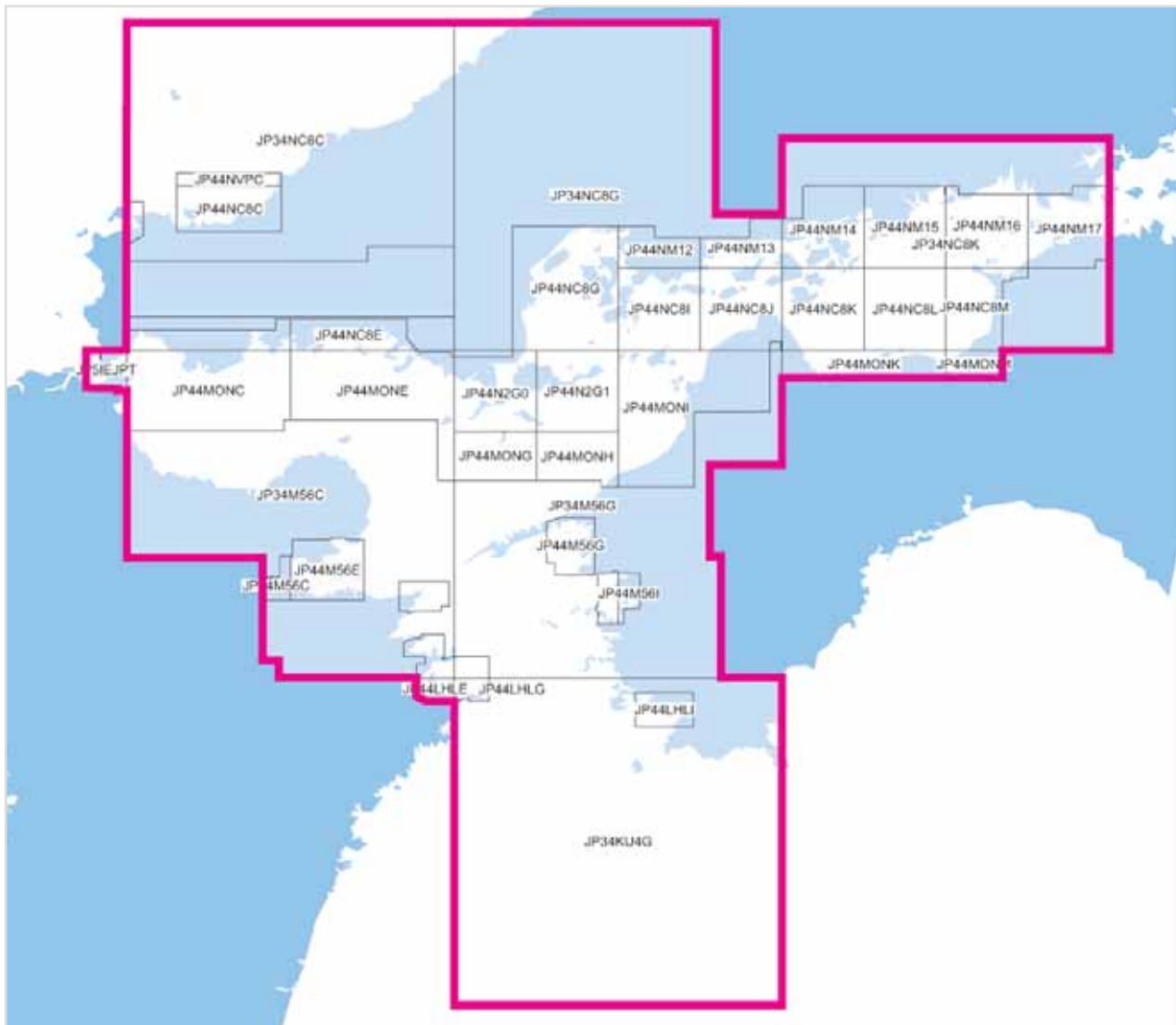
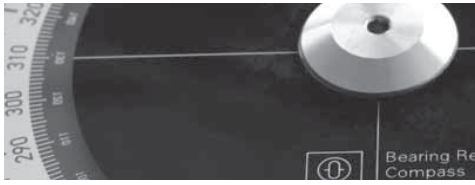
Some Port Folios in complex areas provide coverage for more than one port.

The number of Port Folios within the Admiralty Vector Chart Service is continuously growing. For a full list contact your Admiralty Distributor or visit the UKHO website at www.ukho.gov.uk.



Example of an AVCS Port Folio





Example of an AVCS Port Folio in a complex area

Exceptions

Norway and some other Scandinavian countries do not provide Coastal (Band 3) coverage. Therefore, Regional Folios in these areas include Approach (Band 4) coverage which is consequently not included in the Port Folios within those regions.

The St Lawrence Seaway has little Coastal (Band 3) coverage available. Therefore the Regional Folio covering this area is comprised of all Coastal and Approach (Bands 4 and 5) available.

Both the Suez Canal/Red Sea/Gulf of Aden and Malacca Straits areas are narrow challenging waterways. Thus,

the Transit Folios for these areas include all Overview, General and Coastal (Bands 1, 2 and 3) coverage available. Consequently, there are no separate Regional Folios for these areas.





Support

The Admiralty Vector Chart Service is backed by UKHO Helpdesk support and a 24 hour emergency permit generation helpline, providing complete confidence and peace of mind.

Free of charge trial

To find out if you qualify for a free of charge three month trial, please contact your Admiralty Distributor or visit www.ukho.gov.uk.

The Future of Navigation

AVCS represents the first step in the future of digital navigational information. Over the next three years, the Service will grow to include additional digital data sets based on Admiralty Nautical Publications and relevant software tools to support the complex decision-making process required of the modern mariner.

Further Information

To discover how AVCS can revolutionise your Fleet operation, please contact your Admiralty Distributor or visit the UKHO website at www.ukho.gov.uk

Alternatively, contact the UKHO Helpdesk:

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