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The Electronic Chart

The 2002 first edition of this book came rightly to be known as the definitive textbook on ECDIS. The second edition is even better, so much so that you should give away your first edition to a 'techie' nephew and order a new one straightaway.

The new edition contains numerous revisions and additions throughout. In particular, it embraces the developments in standards, legislation and thinking on ECDIS that have occurred since publication of the first edition. In marine terms, ECDIS is a fast-moving subject and the ECDIS world has changed significantly in the four intervening years. This change is emphasised by the fact that the Foreword to the Second Edition has been enthusiastically written by Dr Wyn Williams, until recently Chief Executive of the United Kingdom Hydrographic Office. At the time of first publication it is unlikely that the authors and the UKHO would have had a lot in common regarding thinking concerning strategy for the evolutionary path of ECDIS. Today, SevenCs, with which one of the authors is intimately connected, is now a fully-owned subsidiary of the UKHO, in 2002 an inconceivable notion.

This book will be valuable to anybody with an interest in the professional use of electronic charts, including seafarers, trainers, legislators, lawyers, designers, installers and those in marine-equipment sales. It is not a book that would be useful to someone wishing only to learn how to use the electronic chart on a leisure vessel.

It is written at a reasonably academic level and is not a training manual, although much is necessary reading for all users of ECDIS. The title of the book is misleading: this is not a textbook on electronic charts, it is a textbook on ECDIS, although other electronic-chart types do get a mention. The RCDS mode of operation of ECDIS is covered, albeit in a fairly dismissive way, which may upset some aficionados of raster charts.

Revisions have increased the page count by 15%, including a new chapter entitled 'Trends of current developments in electronic charting'. This usefully brings together the current issues surrounding ECDIS, explaining what is happening (and has to happen) in the regulatory world to ease the problems that have persistently dogged smooth introduction.

ENC distribution has evolved since 2002, and the new edition covers the latest and more stable situation in depth, including the topic of SENC distribution, a confusing subject to most mariners.

All is not perfect, however. The chapter on the economic aspects of ECDIS is weak, and perhaps best left out of future editions. Many of the savings are hypothetical. For instance, just because you can multiply the hours taken in the correction of paper charts by an hourly rate does not mean that a ship operator can save any of that money; the economics are rather more complex than that. Also, detailed analysis to the nearest cent of various data costs makes the data very ephemeral. The naivety of much of this chapter may even make a negative impression on hard-nosed marine superintendents considering the introduction of ECDIS.

I would also question the wisdom of some of the comments in the section on overlaying ECDIS and radar images, in particular the statement "... the integration of chart-related and vessel traffic information on a single display (ECDIS) provides all the information necessary for navigation and traffic avoidance". Anybody using ECDIS for collision avoidance should be aware that it is not type-approved for this use, although it can most usefully aid such decisions. Only radar is approved for ensuring the necessary tools are available and that target accuracy is sufficient to aid such decisions. The use of chart radar, only briefly mentioned in the book, is the IMO-approved way of combining and displaying radar and ENC-derived data for collision-avoidance purposes.

These few detailed criticisms detract only slightly from the total value of the book. It is extremely well illustrated and generally very readable and authoritative. A definite buy.

Hecht, Berking, Büttgenbach, Jonas, Alexander (2006). The Electronic Chart, The Second Edition. The book describes the basic components, functionality, and capabilities and limitations of Electronic Charts. Including a CD ROM, offering software and demonstrations. Published by GITC, The Netherlands. €59.00. ISBN: 90-806205-7-2. Available via www.hydro-international.com.