

Electronic capture of data in the field



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Background

Fisheries research, assessment and management rely heavily on basic information from population, landings and catch sampling. This sampling is both labour intensive, and, in common with most data collection exercises, can be vulnerable to human error.

Cefas has been using an Electronic Data Capture (EDC) system to record its research vessel fisheries data for the last 15 years. The system is now being re-developed to expand its capability to include on-board catch and discard sampling and a variety of field sampling activities.

Hardware – key features

- Portable, can be carried in a backpack, utility belt or with carry handle.
- Ruggedised – intended rating to IP 67.
- Power input – from 6 to 50 v DC, internal 10 min backup battery.
- Hot swappable power sources, allowing multiple battery units to be carried.
- Interface with digital scales, callipers and GPS.
- Arm or unit mounted LCD display for portable use.
- VGA Flat screen connection for permanent installations.
- USB port for keyboards, data backup and transfer via memory sticks.
- Capture unit internal components are off-the-shelf industry standard.
- Integrated waterproof keyboard/rollerball option.
- RFID wand.
- 2 RS232 ports.
- Network port.
- Audio o/p.

Why use an EDC system

- Speed and accuracy of data collection.
- Saving in staff time – no data entry after sampling trips.
- Data available to managers and biologists soon after sampling has taken place.

Current system status

- Software is in early stages of development, we would like to encourage involvement from other institutes with regard to functionality.

Software – key features

- Windows XP o/s.
- Management of sampling targets.
- Multiple profiles allow one unit to be used in a multitude of sampling situations without configuration changes.
- Autonomous units with data interchange and updates via network connection or USB.
- Multiple language options.
- Live help for species identification and maturity stage evaluation.
- Data checking and validation on collection.
- Sample summary data presented in the field, allowing operator to sample to prescribed levels of precision.
- Structured or free data collection gives flexibility of use or controlled data capture.
- Sample distribution data can be size or weight based.

1 Complete EDC system

Contact us

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About us

Cefas is a multidisciplinary scientific research and consultancy centre providing a comprehensive range of services in fisheries management, environmental monitoring and assessment, and aquaculture to a large number of clients worldwide. We have more than 500 staff based in 2 laboratories, our own ocean-going research vessel, and over 100 years of fisheries experience. We have a long and successful track record in delivering high-quality services to clients in a confidential and impartial manner. (www.cefas.co.uk)

Cefas Technology Limited (CTL) is a wholly owned subsidiary of Cefas specialising in the application of Cefas technology to specific customer needs in a cost-effective and focussed manner. CTL systems are developed by teams that are experienced in fisheries and environmental management and in working closely with clients to ensure that their needs are fully met. (www.cefastechnology.co.uk)

Customer focus

With our unique facilities and breadth of expertise in environmental and fisheries management, we can rapidly put together a multi-disciplinary team of experienced specialists, fully supported by our comprehensive in-house resources.

Our existing customers are drawn from a broad spectrum with wide ranging interests. Clients include:

- international and UK government departments
- the European Commission
- the World Bank
- United Nations Food and Agriculture Organisation (UNFAO)
- oil, water, chemical, pharmaceutical, agro-chemical, aggregate and marine industries
- non-governmental and environmental organisations
- regulators and enforcement agencies
- local authorities and other public bodies

We also work successfully in partnership with other organisations, operate in international consortia and have several joint ventures commercialising our intellectual property.



3 Arm unit

4 Cefas Endeavour

5 Back pack used in freshwater sampling