

OVERVIEW – CMPIC SHIPBUILDING CUSTOMERS AND PROJECTS

1. BAE Systems - Submarine Solutions (UK)

This company was originally called Vickers Shipbuilding and Engineering Ltd (VSEL) in 1996 when we first installed the forerunner to CMPIC, which at that time was known as icePIC.

The first project that icePIC was used on was the Auxiliary Oiler – a supply ship for the Royal Navy. Two of these vessels were built – Wave Knight and Wave Ruler - one at Barrow in Furness, the other at Govan Shipyard on the Clyde in Scotland.



The second project for VSEL for which CMPIC was used were two Landing Platform Dock vessels. These are helicopter landing vessels which also have on board fast inflatable.



In both the case of AO and LPD, the cableways were designed using CADDS5, formerly a Computervision product now owned by Parametric Technology (PTC).

VSEL was taken over by GEC, then Marconi, then by BAE Systems. During that time our cable management software has been used continually.

One of the functions that was particularly useful for these projects are the Configuration Management capabilities of CMPIC. Where more than one vessel is being designed and built to the same specification, configuration management offers major savings in time and effort.

The current project for CMPIC is the **Astute Class Attack nuclear powered submarine**. These boats have again made use of the Configuration Management aspects of the software since 6 hulls have been built in addition to its cable routing facilities.



BAE Systems – Naval Ships (UK)

We first installed our icePIC software at what was then Yarrow Shipbuilders in 1998.

Since that time the software has been used on the Type 23 Frigate and Type 45 Destroyer programs.

The CAD input originally to icePIC (and later to CMPIC) is from a CADD5 module known as ShipElectric which was where the cableways were defined.

All cable routing is carried out in CMPIC which is then also used to manage installation planning and status monitoring of cable pulling and terminations.

During 1998 – 2000 we worked closely with Yarrow Shipbuilders to build into our Production Module the functions and processes required to support their business.

An important factor in the construction of the Type 45 Destroyers is that this was carried out at two sites. Individual self-contained blocks were built at BAE's Portsmouth shipyard and then transferred by barge to Scotland where they were added to the blocks built there.

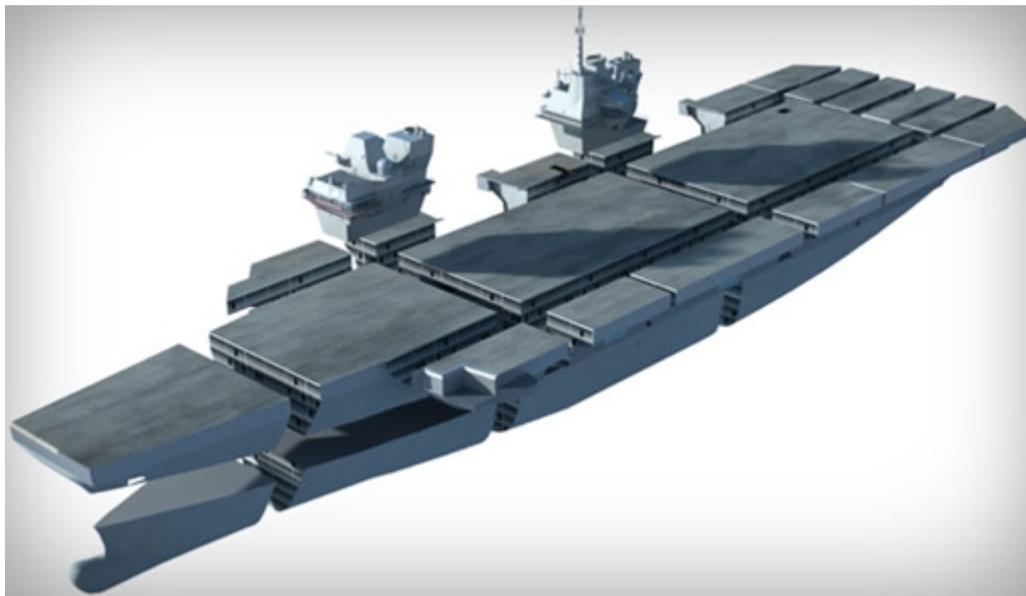
From a cabling point of view, obviously this meant routing and installing both those cable which were contained within the blocks themselves, as well as catering for all cross-block cables. CMPIC was used to route all cables including those going between blocks. The software then documented where all the coils of cables had been left for through cables.



In addition to block construction, there have been six Type 45 vessels built. The cabling design and installation for these six vessels was managed using CMPIC's Configuration Management functionality.

BAE Systems & Aircraft Carrier Alliance (UK)

CMPIC is currently being used to manage the routing and installation of cables on the two new aircraft carriers for the Royal Navy.



The CAD design work for the cableways for these vessels was carried out in Sener FORAN and exported to CMPIC to be used for cable routing.

Like the Type 45 project, the aircraft carriers are being built at two yards as blocks. In the same way as on Type 45, CMPIC is being used to manage the internal and through block cabling.

DCNS (France)

DCNS have been using our cable management software since 2002.

It was initially used at their Cherbourg site for routing cables on the Scorpene submarines. At the same time it was used at their Lorient yard on the Delta vessel and subsequently on the Horizon frigate. For the Scorpene project CMPIC was also used by Navantia in Spain who were subcontractors to DCNS for preparation of cable terminations design and documentation.

At present CMPIC is being used on the FREMM frigate and Barracuda submarine projects.

We have worked closely with DCNS to ensure that CMPIC is used efficiently as part of their design process. In DCNS' case the software is used primarily for cable routing and supports their particular methods.

Fincantieri (Marinette Marine) (USA)

Marinette Marine purchased CMPIC three years ago for use on the Littoral Combat Ships (LCS) for the US Navy. They are using CMPIC for the routing of cables based on a cableway design supplied by Gibbs and Cox (also a CMPIC user). The cableways themselves were designed using ShipConstructor software which is an AutoCAD based CAD tool.



In addition to routing cables in CMPIC, Marinette also use CMPIC for planning cable installation and then capturing installation statuses using CMPIC's Bar Coding module.

Gibbs & Cox (USA)

Gibbs & Cox are naval architects and engineers and have been involved in design of the Littoral Combat Ship (LCS) for the US Navy. They used the ShipConstructor CAD application to create the cableways and hangers which were then exported and used as the basis for CMPIC's cable routing.

Sea Trucks Group (Singapore)

STG have been a CMPIC user since 2011. They have been using CMPIC to route cables for the JASCON18 vessel. The cableways were designed in AutoCAD using CMPIC's own AutoCAD interface.



STG have recently purchased CMPIC's Bar Coding module to enable them to capture installation status of cables as they are pulled and terminated.

There is a separate project overview (attached) which was created by STG themselves to explain the benefits they have found from using CMPIC.

RMK (Turkey)

RMK have been CMPIC users since 2010. They have been using CMPIC for routing cables on both commercial and naval vessels.

Alewijnse (Romania)

This company was formerly RETEC SA, a specialist electrical installation company for the shipbuilding industry. They have been CMPIC users since 2009. They use CMPIC for both routing cables and for installation management.

The cableways are designed in AutoCAD using CMPIC's AutoCAD macros.

In early 2013 Alewijnse also installed CMPIC's Bar Coding module to enable them to input cable installation statuses and monitor cable usage.