



## 'ClassDirect Live' — A Voyage in eBusiness for Lloyd's Register

As many CEOs will tell you today, the Internet is revolutionizing business dynamics, regardless of the industry sector. The pace of change clearly varies wildly from sector to sector. Even in the traditionally conservative shipping industry, increasing business pressures are driving a major re-evaluation of how Web technologies can add customer value, reinvigorate existing business processes, and support new business opportunities.

### An Inspector Calls

An excellent example of this can be found within the ship classification industry at Lloyd's Register (LR) – the maritime safety and information services provider based in the United Kingdom. LR's primary goal is to ensure ship safety. Part of that process involves surveying them on a regular basis to comply with national and international requirements. Surveyors carry out the inspections and report their findings to LR, who in turn, holds and maintains that information for use by relevant organizations.

Ship operators wishing to maintain their fleets effectively and efficiently need up-to-date information about the survey status and maintenance needs for each ship. But, until those survey results and maintenance requirements are known, ship owners are unable to plan ahead with any degree of certainty, potentially losing revenue, and possibly long-term business.

LR's first step towards making this information more readily available was warmly embraced by customers. The former ClassDirect Live system provided survey data as a static file, distributed on floppy disks, CD-ROM, or as an Internet download.

With the emergence of the Web as a low-cost vehicle for global communication, LR saw the opportunity to improve the system. Online, near real-time access to this information was potentially available to its thousands of customers around the world. The benefits of such a system would be significant – not only would fleet managers be armed with better decision-making capabilities, LR itself would, in the process, add a new layer of value to its core services, gaining an edge in an increasingly competitive market.

### Class of Its Own

The result was the new ClassDirect Live system. Launched in June 1999, this interactive system delivers live ship survey status information via the Internet through a standard Web browser interface. Fleet managers can access the most comprehensive database in the marine industry, complete with up-to-date construction, classification, and statutory survey history of LR-classed ships. ClassDirect Live's list of features includes five-year survey planning facilities, survey checklists and master list items, a range of technical and historical data, plus access to rules and safety standards information.

#### Goal:

Provide online, near real-time access to ship maintenance requirements and survey records, allowing ship owner clients to facilitate decision-making and business planning practices.

#### Why Lloyd's Register Selected DataDirect:

Shadow z/Direct provided seamless connectivity between back-end mainframe databases and web-based front-end applications.

#### Business Benefits:

Improved information flow, organization, and instant access to updated ship surveys, resulting in a quicker customer service process.



Ship owners and operators need secure and confidential access to data on their own fleets, so access is managed through a secure website which includes the use of encryption technologies. The system also implements a thin client design so that all users need is a Web browser on the desktop, with no requirement for additional plug-ins or special software. In addition, a recently implemented feature enables LR's surveyors to input their reports into the database within two days of the planned inspection. This is immediately available to subscribers, a far cry from the traditional three month turnaround.

Within months of it going live, over 300 users had subscribed to the system, with an estimated 1,000 users subscribing in early 2000. By October 1999, there were over 700 internal users of the system. These figures are expected to rise as potential uses naturally emerge over time.

### **Valuable Cargo**

"We clearly realized from listening to our customers that we needed to retrieve information gathered on their behalf more quickly and efficiently," says Martin Brooking, principal surveyor of the Systems Development Group in LR's technical planning and development department. "We collect and hold a huge amount of information, and probably have the most computerized database environment in the industry, using a mix of the best database types for each application."

The three main databases that are front-ended by ClassDirect Live cover world fleet data, as-built details of each ship, and survey details. The first is the core of the operation, the register and the index, which remains unique in the world of shipping.

The Link, 'Ship's details' goes further, providing a more in-depth view on how the ship was built, technical details about the construction of the ship, and identity of the main manufacturers of the engines. It, like the Register of Ships, is based on Oracle. The final database, and the most complex, contains details of surveys carried out on every LR-classed ship since 1987. Based on IBM's IMS mainframe database, it stores different elements about ships in different parts of the database, including defects and damage. This provides an invaluable record of the structural performance of ships over time.

### **Existing Trade Routes**

The three-tier architecture of ClassDirect Live meant that a key part of the solution was to ensure reliable connections to the database from the Web server. This was particularly important for the older and very high-performance IMS-based surveys database. While connections to Oracle and other popular relational databases are relatively straightforward, links to older ones over networks are not.

The solution, through prime contractor ICL, was DataDirect's data access and legacy application renewal product – Shadow z/Direct, which provides the seamless connectivity between back-end mainframe databases such as IMS, and Web-based front-end applications such as ClassDirect Live.



"In this event," asserts Brooking, "Shadow z/Direct proved to be the crucial component for providing fast access to the mission-critical IMS database. And, we were very impressed with the reference sites we visited."

### Tide of Change

Work on the initial system began with an internal prototype operational in just six months. The first production release of ClassDirect Live was unveiled in June 1999, less than 12 months after the project commenced.

LR's surveyors were the first to benefit from the near 'real-time' availability of information. Before they initiate a new survey, they need access to all the relevant data for the ship. The availability of up-to-date information means they can do their jobs more efficiently and effectively, thereby aiding ship safety — a primary concern for LR. "This new service improves workflow and organization," adds Brooking. "Customers are now more able to keep their ships' surveys up-to-date — a situation that was not always possible in the past."

The system also improved LR's internal operations and specific work processes. LR staff in local offices and regional centers are now able to instantly access virtually all information. Previously, they had to make requests to headquarters and await a response. This enables workers to make more decisions independent of headquarters, thereby speeding up the customer service process, and adding more value to the core customer proposition.

Another ancillary benefit is that ship owners need not waste valuable office space with shelves and shelves of survey records and schedules. All the information they require is instantly available through ClassDirect Live.

### New Routes Emerging

But, that's not all. Once the system was up and running, there emerged uses of the data not previously conceived. New ideas and suggestions are constantly coming forward.

"We started looking at making available summary information for each fleet which shows what surveys are coming up for each ship and on which month, in an easy grid format," added Brooking. This allows fleet managers to plan ahead for specific types of surveys and repair work. Ships are out of action for shorter periods of time, thereby giving the owners potentially huge cost savings. This may sound simple enough, but it was previously next to impossible to do. Now, all the information we hold is easily available to us, and that's the beauty of the system."

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Martin Brooking  
Principal Surveyor  
Systems Development Group  
Lloyd's Register



## Conclusion

Aside from the obvious improvement in customer service, LR is also keenly aware that it operates in a competitive, commercial world despite its non-profit-distributing status. "Our primary goal in designing the new system was to serve our customers better, but we were also keen to keep ahead of the competition, and we believe that with ClassDirect Live we have certainly leapfrogged our competitors," adds Brooking.

"From a technology standpoint," concludes Brooking, "the link to IMS through Shadow z/Direct goes like a greyhound. We had a great deal of support and persistence from DataDirect's staff, which goes right to the country manager level. In short, I'm very proud of what we've done here. It really is a very useful system."

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