

CASE STUDY  
**48**

# Madcap

Making mergers & acquisitions work through a fast, effective and unifying IT solution.



## THE COMPANY



Australia's Dairy Farmers Group has been on a major growth streak. After many mergers and acquisitions, the co-operative today is the largest supplier of fresh milk products in Australia, operating in New South Wales, Victoria, Queensland and South Australia. Consolidation within the dairy industry has been a universal trend as groups bolster their resources to vie for new international markets. Along with growth has come big business and changes, particularly for the Dairy Farmers Group, where in Australia the industry faced deregulation, nationalisation and GST all on the one day.

Contec Group  
International's JADE-built  
Milk Analysis Data  
Capture and Processing  
(MADCAP) system is now  
in its fifth release and is  
used by over 20 large  
dairy groups throughout  
the world.

Helping them rise to this challenge is Contec Group International (CGI), a New Zealand-based software development company specialising in JADE. CGI has over 30 years experience in developing solutions for the dairy industry in New Zealand, Australia, Fiji and USA. They are also highly skilled in library and information management services - an important asset in developing new generation dairy systems which combine facts, figures and essential integration.



MADCAP manages and reports on milk flow and quality on a daily basis from the farm gate to the factory. It also handles monthly payment to over 2000 farmers and share farmers.

Farm	Date	Pool	Vol	Fat	kg	Pro	kg
963302	01/08/2000	30 Seasonal	4413.00	3.43	151.31	3.08	137.36
963302	01/08/2000	22 North Yearly	29940.00	3.61	1080.83	3.04	910.18
963302	01/08/2000	12 North Daily	13843.00	3.56	492.81	2.99	413.91
963302		Farm total	48196	3.58	1724.95	3.03	1461.45
963303	01/08/2000	30 Seasonal	9206.00	3.92	360.82	3.05	281.71
963303	01/08/2000	22 North Yearly	29906.00	4.16	1244.09	3.04	909.14
963303	01/08/2000	12 North Daily	12624.00	4.12	520.11	3.04	393.77
963303		Farm total	51736	4.11	2125.02	3.04	1574.62
963304	01/08/2000	30 Seasonal	34589.00	3.56	1236.27	3.29	1135.93
963304	01/08/2000	22 North Yearly	95884.00	3.67	3518.94	3.34	3202.53
963304	01/08/2000	12 North Daily	38779.00	3.52	1385.02	3.38	1310.73
963304		Farm total	169252	3.62	6120.23	3.34	5649.19
963306	01/08/2000	30 Seasonal	11088.00	3.40	377.89	2.94	325.96
963306	01/08/2000	22 North Yearly	30736.00	3.38	1038.88	3.09	949.74
963306	01/08/2000	12 North Daily	13405.00	3.23	432.98	3.09	414.21
963306		Farm total	55229	3.35	1849.75	3.06	1689.92
963308	01/08/2000	22 North Yearly	22302.00	4.12	918.84	3.21	715.89
963308	01/08/2000	12 North Daily	10156.00	4.09	415.30	3.28	333.70
963308		Farm total	32458	4.11	1334.14	3.23	1049.59
963312	01/08/2000	22 North Yearly	2617.00	3.50	91.60	2.81	73.54
963312	01/08/2000	12 North Daily	5718.00	3.53	202.06	2.78	158.96
963312		Farm total	8335	3.52	293.65	2.79	232.50
963315	01/08/2000	22 North Yearly	26494.00	3.78	1001.47	2.96	784.22
963315	01/08/2000	12 North Daily	12374.00	3.83	474.40	3.04	377.09
963315		Farm total	38868	3.80	1475.88	2.99	1161.32
963316	01/08/2000	22 North Yearly	16280.00	4.12	670.74	3.15	512.82
963316	01/08/2000	12 North Daily	11406.00	4.12	469.73	3.15	359.23
963316		Farm total	27686	4.12	1140.46	3.15	872.05

## THE BUSINESS CHALLENGE

The Dairy Farmers Group faced massive information management challenges. Years of mergers had left them with disparate regional systems controlling and reporting on milk volume and quality. Deregulation on 1 July 2000 saw the introduction of a nationalised payment system for the Group's members (farmers) based on quotas and percentages, with slight variances over four different regions within the Group. The system needed to cater for GST and process monthly AUD\$35 million in payments to farmers and suppliers of the Dairy Farmers Group, including rural trading stores, banks and other institutions. In addition, it needed to provide farmers, milk tank drivers, testers and all those involved in the supply chain, up-to-the-minute information on their product (milk).

## THE SOLUTION

MADCAP (Milk Analysis Data Capture And Processing) from CGI provides a comprehensive JADE-based solution helping organisations meet their e-business and e-commerce goals. Now in its fifth release, the product is used by over 20 large dairy groups throughout the world. Its functionality is based on years of research into the requirements of dairy companies, to the point that it can handle 90-95% of the requirements of most dairy companies. While customisation is typically required to suit individual reporting requirements, it is a relatively simple and straight forward process.

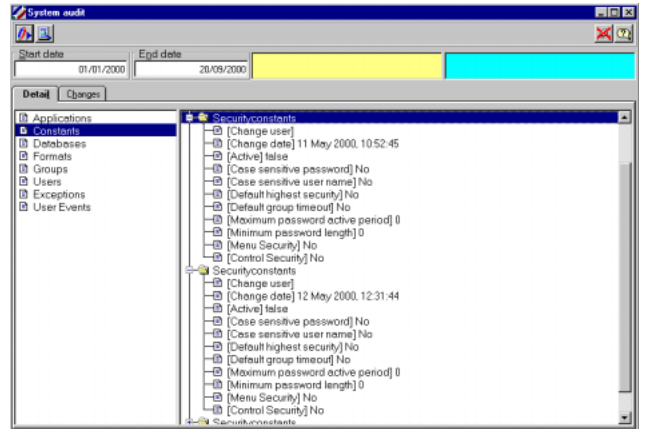
## THE SYSTEM

The application manages and reports on milk flow and quality on a daily basis from the farm gate to the factory. It also handles monthly payment to over 2000 farmers and share farmers. MADCAP consists of five main modules: Milk Testing, Milk Collection, Milk Payments, Names & Addresses, and Security

Milk Testing monitors milk component (fat and protein) and milk quality (bacteria), allowing real-time connections to a large number of milk analysers and automating entry of daily information. It provides a statistical analysis of every result from every farm on a daily basis to highlight problems occurring within the quality system.

Milk Collection records each farm's daily milk volumes through transport management systems on each tanker. This system also works in reverse so that tanker drivers can report the previous day's quality information back to each farmer when they visit. It allows for extensive reporting on a factory-by-factory basis as well as breakdowns for the co-operative nationally.

Date	Pck	Vat	Vehicle	Grade	Penalty	Vol	Fat
23/12/1998	1	1	20	1	2	470	4.70
23/12/1998	2	2	20	1	2	450	4.50



Milk Payments manages monthly payment to farmers and share farmers based on the daily supply from each farm. It takes into account ownership of each farm and may make several payments for each farm according to shareholder percentages. This module can handle payments for milk supplied, state imposed or share acquisition levies, farmers' bank loans, and even rural store accounts. Payment amounts can be imported from various organisations, with the payment user name module able to print cheques automatically, deposit amounts directly into bank accounts or integrate with third party systems such as SAP, as in the case of Dairy Farmers Group.

The other two modules manage farmer profile information and complex security that can cater for seasonal workers and temporary staff. It also provides an extensive auditing system so that each and every change to any data within the system is captured.

MADCAP currently operates on all Microsoft Windows platforms. Dairy Farmers Group has one server based in Sydney, servicing all users within Australia. It runs the JADE database service and the JADE application server. The server software can run on hardware platforms ranging from Pentium-166Mhz PCs to servers running dual Pentium 750Mhz. The application is deployed entirely via JADE Smart Client Technology™, with JADE Smart Client workstations running on all types of PCs from 486-100Mhz upwards.

## KEY DEVELOPMENT ISSUES

CGI had five months to customise the MADCAP solution for Dairy Farmers Group, deploy it at more than 20 sites and go live nationally. In 1997 JADE was selected as the key development tool for MADCAP because its robust database support meant it could comfortably manage the requirements of many dairy systems. It was cost-effective, and faster to develop and deploy than other comparable tools.

Customisation was a priority for CGI, as they saw their solution being popular within the dairy industry. Several organisations have implemented MADCAP largely as is, changing only the GUI to accommodate specific presentation and reporting needs.

What makes JADE and therefore MADCAP easy and fast to customise is its intelligent way of combining data, logic and graphical user interface. The entire MADCAP application is built upon a base of re-usable functionality in order to create multiple logical databases, and maintain access to applications within those databases for users or groups of users. This large set of base classes and functionality is defined within its own separate schema. New functionality such as Interactive Voice Response (IVR) is currently being built in this way so that, when complete, it will be a re-useable component. This is one of the major reasons why working in JADE is less expensive than other development environments. And, while it was mainly developed for the dairy industry, CGI is finding that the core system has a lot of appeal to those looking for security and administration solutions.

## THE FUTURE

MADCAP has delivered a consistent and uniform national system for all processes relating to the collection and payment for milk. Delivered on time, this new generation system meant that the Dairy Farmers Group was ready to tackle the challenges of the 21st century and benefit from considerable savings in IT support costs and automation of daily processes.

The solution will easily support new enhancements which deliver increased functionality. For example, IVR will allow farmers to telephone the system and get daily information over the phone. With MADCAP and JADE, the Dairy Farmers Group and others in their industry have a solution to handle whatever changes may come their way.



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