



**ProSolv CardioVascular**  
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## Echo at Work and Home: ProSolv® CardioVascular and Philips QLAB

Unique integration strategy allows rapid review and analysis of 3D echocardiography data, anywhere it's needed

For Associate Professor David Playford, an accomplished echocardiography specialist in Perth, Australia, leadership of a busy and growing practice has left very little time for reading echocardiograms during normal work hours. At the same time, the practice has quickly jumped to the forefront in analysis of 3D echocardiography images, a discipline that requires continual practice to hone one's expertise – again, not an easy task for Prof Playford and his busy colleagues, who provide a comprehensive service in general cardiology, electrophysiology, echocardiography, and cardiac testing.

The solution to this dilemma was a custom-built configuration of ProSolv® CardioVascular, the high-performance one-stop shop for instant image viewing and reporting, united with QLAB, software from Philips Healthcare that provides advanced analysis and quantification of 3D ultrasound images. This elegant solution is clear proof of concept that these two powerful technologies can work together harmoniously.

This unique pairing of ProSolv® CardioVascular and Philips QLAB – custom-built in close collaboration with Vision Software of Queensland, Australia – provides the ability to seamlessly access 3D images through the advanced, reliable architecture of ProSolv® CardioVascular, either from the comfort of home or from any 1 of the group's 5 practice locations.

“The most important part is that I can view what I need – right where I am,” says Prof Playford, who helped set up the advanced echocardiography laboratory at Royal Perth Hospital, and founded Hearts West, the 5-specialist practice that features the only privately owned 3D echocardiography machine in the state of Perth, Australia.

The ability to work with the 3D echo data away from the office is particularly appreciated: “As a clinical cardiologist, I often do not have time to read echocardiograms during normal office hours, so I had to find a strategy allowing me to work after hours and stay up to date, particularly with our 4 young children at home,” Prof Playford says.

The success of this custom solution – now a result of a formal affiliation between ProSolv® CardioVascular and Philips – is good news for specialists in 3D echocardiography. The ProSolv® CardioVascular interface to Philip's proprietary QLAB ultrasound software now delivers efficiency benefits for clinicians and enhances the accuracy of diagnosis. Clinicians can launch QLAB quantification tools directly from the image while within the ProSolv® CardioVascular application, and view and analyze 3D images or other raw data, then save the data and images back to the ProSolv® CardioVascular database and clinical report.

Even without that formal, high-level integration, Prof Playford has a custom solution that meets his needs right now. An average of 861 examinations per month are processed in the system, representing an average disk usage of 37 GB/month.

### How It Works

Taking advantage of the innate image storage and query/retrieve features of ProSolv® CardioVascular, 3D data sets are exported from the ultrasound machine in a DICOM wrapper to the ProSolv® CardioVascular DICOM server. The server strips off the wrapper and saves the 3D data



### Why Fujifilm?

“Without ProSolv® CardioVascular, I would be unable to achieve the speed of reporting and efficiency we have today.”

**David Playford,**  
MD, FRACP, PhD, FCSANZ  
Echocardiography Specialist  
Hearts West  
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## ProSolv® CardioVascular and Philips QLAB *(continued)*

with the rest of the patient study. Using an automated replication system, ProSolv® CardioVascular can effortlessly transmit the 3D data in concert with clinical measurement and 2D image data, allowing clinicians access to one of any of the designated sites at work or home.

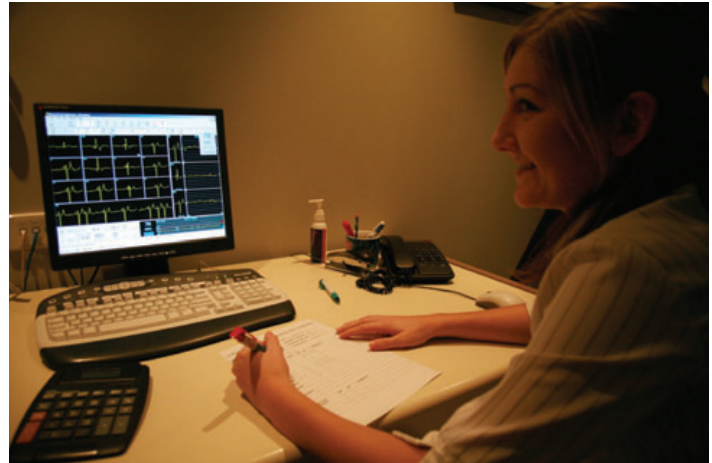
This creative solution exploits an existing feature of ProSolv® CardioVascular to distribute file folders, one of which contains the QLAB data sets. Without this integration, image files stored in ProSolv® CardioVascular would need to be sent to QLAB, redundantly, for analysis, and the user would have to hand-enter data into ProSolv® CardioVascular for display on the clinical report. That data entry duplication would not only be inefficient but also would introduce a probability of error.

Of course, the ProSolv® CardioVascular network handles much more than 3D echocardiography: data from transesophageal and stress echocardiograms, holter monitoring, and blood pressure monitoring studies are all modalities available via ProSolv® CardioVascular. For Hearts West, the ability to read and manipulate standard 2D as well as 3D data from any site was critical.

“The beauty of 3D echocardiography is the ability to manipulate the data yourself to get a feel for the pathophysiology of an individual patient,” Prof Playford explains. “With this fully automated system, a 3D echocardiography study may have been performed in Subiaco, whereas I may be consulting in Armadale (30 miles away) or sitting at home. I can access the full data set wherever I am located and provide finalized reports in less than an hour.”

### Network Details

In the Hearts West setup, data is housed on the ProSolv® CardioVascular server at the main practice office in Armadale, a suburb of Perth. Preliminary studies saved at several remote scanning sites are replicated to the Armadale ProSolv® CardioVascular server. Studies assigned to Hearts West specialists are then replicated to each respective PC or NAS, allowing the doctors to finalize studies from the main Armadale database using a local image cache, either at work or at the homes of Prof Playford and his wife, Dr. Jenny Deague, MBBS, PhD, FRACP – also an echo-



cardiography specialist – and the other Hearts West colleagues.

“At home, when I am ready to read the study, I log into the central database, but pull images up from any local network drive,” Prof Playford says. “It’s similar to me being at the central Armadale office, and almost as fast. All images and 3D data are right there in front of me.”

The end result of integrating ProSolv® CardioVascular and Philips QLAB is an enhancement of patient care at the rapid pace required by today’s competitive environment. “Without this function of ProSolv® CardioVascular,” Prof Playford says, “I would be unable to achieve the speed of reporting and efficiency we have today. The improved accuracy of diagnosis, speed of collecting data, and efficiency of reporting would not be nearly as great.”

*“My location does not matter, as long as I am connected to the ProSolv® CardioVascular network. I can open QLAB in ProSolv® CardioVascular and perform the analysis I need to do.”*

*– Professor David Playford*

As busy parents who work split shifts to care for their children, the Playfords are pleased that any given study can be replicated at home within 15 minutes of that study being performed. The result is same-day reporting, inclusive of 3D data, no matter where the study is performed. Similarly, consulting with patients is also enhanced.

The specialists consult in multiple locations, giving them easier availability to all relevant images.

### Facility Facts:

- 5 Practice Locations
- 5 Specialists
- 800+ Exams per month

### CVIIS Facts:

ProSolv® CardioVascular server at Armadale

Additional usage at:

- Vascular West South Perth
- Vascular West Hillaries
- Rockingham
- Vascular West Subiaco

Integration with ultrasound machine: Philips QLAB software

ProSolv® network also handles data from:

- Transesophageal and stress Echocardiograms
- Holter Monitoring
- Blood pressure monitoring

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