Argus Connect Forum
Canberra 6th and 7th May 2004
Summary courtesy of Dr David Guest

I recently attended the ArgusConnect forum in Canberra with accommodation and travel paid by infrastructure funding of the Northern Rivers Division of General Practice. The following is my own personal (?mis)understanding of the software and interpretation of the challenges facing Argus.

Argus is a communication package for secure medical communication.Over the last four years, it has been developed at the CCeH in Ballarat with funding from the Commonwealth and project ownership by the Top End Division of General Practice. As with many government funded projects the intellectual property resides with the Commonwealth of Australia. However, the Commonwealth, business and the IT community all recognise that government is not suited to deployment of software (and possibly business enterprise in general). Alternative arrangements have to be found to avoid government funded software becoming just another interesting project that is locked away (or lost) in the government archives or given away to private industry.

A new approach is to be tried. This has possibly come about from the Herb initiatives in open sourcing government funded medical software or more probably simply as a result of the increasing awareness of open source software licensing and reusability in government circles and the general community. The Department of Health has stipulated that the source code for Argus be both published commercialised. Herein lies the dilemma for the Argus developers who are professionals who have come from an industry background. How do they open source their code, build a business model and retain control of the code in which they have invested several years of their lives and in which they strongly believe as being for the greater community good. After looking at many open source licenses, the solution they havedeveloped is the ArgusConnect license. They are not interested in a BSD license where others may come in and take their code. They are notin favour of the GPL since they believe that as a mission criticalpiece of software, on which people's lives could depend, they cannot allow forking and loss of control over quality software. The havetherefore proposed the ArgusConnect license. This is a veryrestrictive license in which all code is controlled by ArgusConnect. There is no guarantee that donated patches will ever find their wayinto the product, which is reasonable, but nor is there the chance to fork the code, which is not. It remains to be seen whether the open source community or other commercial interests will find the ArgusConnect license acceptable.

The dilemma of resolving open sourcing *and* commercialising government funded projects does not just apply to Argus but to all such present and future government funded projects. One answer to how to do this could be HoW. The Health openWare Foundation was officially launched at the conference dinner on Thursday night by Roslyn Dundas MLA for Canberra. Ros is the young woman who pushed through Australia's first successful open source bill (http://www.roslyndundas.com/pdf/OSS_bill_final_version.pdf) in the ACT.

The aims of HoW are those of ArgusConnect. They endeavour to reconcile the wish of government to make their computer funded project source code generally available with fostering an environment in which the software can find commercial application and also, if possible, allow the open source community an opportunity to accelerate the code development process. The difficulties in achieving this are apparentto the interim Board and the solutions will take time to appear. The current members of the Board are Shane Dawson, CEO of Top End Division of General Practice, Ross Davey, now of ArgusConnect and a long time veteran of the Australian medical IT industry, Peter MacIsaac, a former GP with a long experience in medical informatics and now a Department of Health bureaucrat and Branko Cesnik, the former Director of the Centre for Medical Informatics at Monash University. The Board is hoping to expand its membership seeking further representation from the AMA, Australian Divisions of General Practice and the General Practice Computing Group. They have an onerous responsibility in shaping the future of medical IT development in Australia.

And so to the software itself. For those unfamiliar with ArgusConnect, it is a java based application running on an Interbase database. The developers are however planning to move to a MySQL database in the next few months. This should have the advantage of:-

~ 1. avoiding some bottlenecks that have become apparent in the
~ Interbase / Firebird product
~ 2. being more truly cross platform with Apple being supported as
~ well as Linux and Windows and
~ 3. allowing a potentially larger group of MySQL savvy developers to
~ participate in the project.

The core of the Argus software suite is the Argus server. Its function is to accept messages from user applications, wrap them in HL7 and encrypt with HeSA PKI. It then shoots the message across the net to an Argus server at the GP's or specialist's surgery where the message is decrypted, parsed according to the structure of the MIME message and HL7 payload and routed to the receiving application. Successful completion of this step is followed by an HL7 ACK to the originating server.

Argus has an internal addressbook that can synchronise with an external LDAP server. It is envisaged that LDAP servers will be run by local Divisions and Area Health Services. The most important feature of these LDAP servers will be to make users' public keys readily available.

Perhaps Argus' killer feature is its ability to receive and deal with a variety of messages using internal scripts. These individual scripts can cope with differing message formats including the various versions of HL7, ASCII, RTF and PIT. The scripts can be written to work with the message itself or on attachments if the clinical payload is rendered this way. It is relatively trivial to add PGP encryption to Argus but this will not be a focus for the developers until such time that a strong business case can be made to add this function.

If GPs are keen to see Argus deployed, pathology and radiology companies are even more keen. The dominance of the pay per message paradigm in the Australian radiology scene has made it anxious to find

cheaper alternatives and Argus will provide that solution. Funding for Argus from this sector is likely due to the strong business case it makes.

The importance of reaching a critical mass in a local area was emphasised by Dr Stephen Barnett in his presentation. Subsequent sessions highlighted the need to engage Divisions in the roll out process. By rapidly achieving and supporting a core group of early adopters the increasing value of the network effect will encourage less technically advanced doctors to join a local Argus network.

Argus utilises a mixed free and commercial business model. The core component, Argus server is free and downloadable from the net (see http://www.argusconnect.com.au/products.html). Other free components are the API which was developed after detailed discussions with Dr Frank Pyefinch and the ArgusMAPI32.

The commercial components of Argus are ArgusMail and ArgusWord. ArgusMail is a viewer to the ArgusServer database and allows the display of clinical messages for those who do not have an electronic health record. ArgusWord is a Microsoft Word template. Loading this template allows a doctor's secretary to generate an Argus compatible document that can be emailed directly from her word processor. The cost of this ArgusGold package is $200 and is aimed at the specialist market.

The last package in the Argus suite is ArgusEnterprise. It is customised to run on commercial databases like Oracle and has more advanced administration facilities. It would be useful for pathology and radiology companies and large (level 5) hospitals. It costs $4,000.

Finally ArgusConnect hopes to make money from services. Doctors wishing to setup Argus may contact ArgusConnect directly. A project scoping visit is free and additional time is charged pro rata at $920 per day. The fees for some typical scenarios can be found on their website (http://www.argusconnect.com.au/projects.html). Costings for Divisional projects where IT officers or external consultants can do the local configurations would be significantly cheaper.

So is the Argus the vessel that will carry us to the Golden Fleece of cheap, reliable, secure, electronic medical communication? The answer to that is in only known to the brave Argonauts scattered in Divisions and a few surgeries around the country.