



## Clarinox – Sending a clear signal

### Facts at a glance

#### Challenge

The existing website had become cluttered and difficult to understand, and was not addressing the required audience.

#### Type of designer engaged

Website designer

#### Most important part of the process

Communicating the needs of the business and designing a site that reflected these.

#### Most difficult part of the process

Coming up with a design that expressed the true nature of the company's business, and building the site to the company's expectations.

#### Solution

A website that translates highly technical subject matter into key messages accessible to a broad audience, with a content management system that the company can maintain on its own.

#### Outcome

Traffic to the website more closely matches the target audience.





Company background	Designer background
Clarinox www.clarinox.com Established: 2001 Industry sector: Embedded Systems Project lead: Trish Messiter, CEO and Director of Business Development	NeoPurple www.neopurple.com  Type: Multi-disciplinary design consultancy Project lead: James Greenwood

## Background to the project

Clarinox is a small company specialising in wireless technology. The company had built its own website when it launched in 2001, and additions had been made on an ad hoc basis since then, resulting in a site that was untidy and confusing. The site was also heavy with technical terms, and was difficult for a non-technical person to understand. This was an obstacle to Clarinox's business development because the site was often not comprehensible to business managers with the financial power to engage the company's services. As Clarinox is a company that works with IT it was important that its website present a professional image and display technical competence.

## Selecting a designer

NeoPurple has been designing websites since 1997 and was chosen for its experience in web design for technology companies.

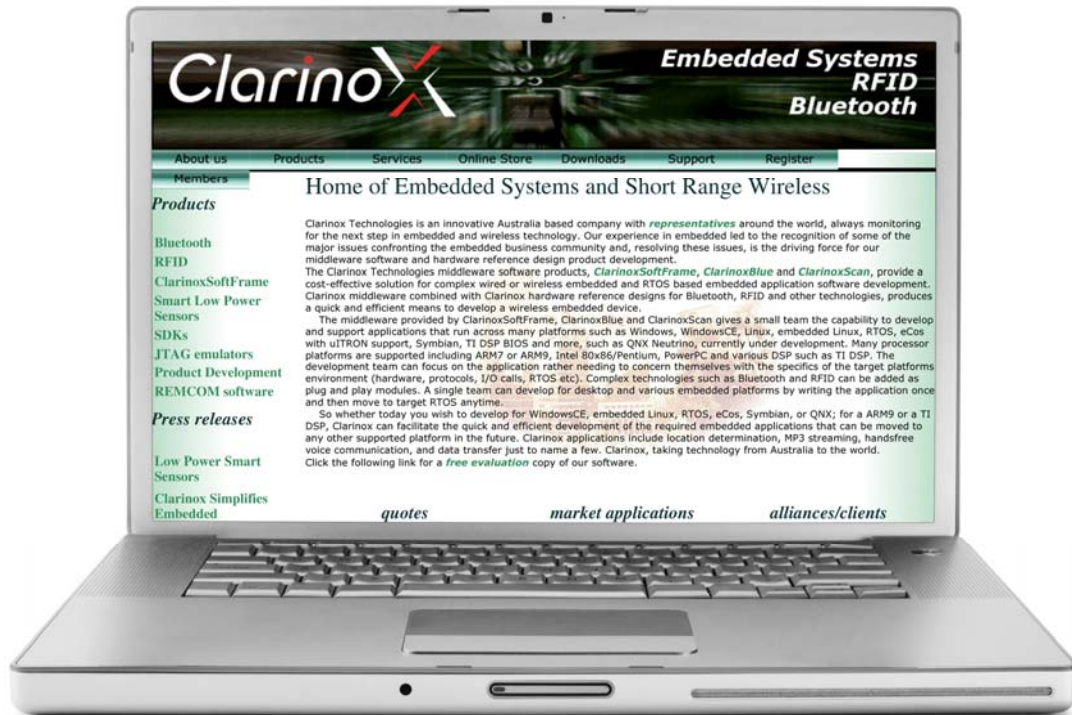
## Role of the facilitator

A facilitator was appointed by Design Victoria to undertake a number of roles: helping the client to make decisions about a suitable designer, ensuring that expectations were understood and managed throughout the process, and providing a mechanism for problems to be addressed. The facilitator's main function was to help ensure that each party asked the right questions at different parts of the project.



## Response

### Analysing the existing site



Above: Clarinox's original website homepage

The old site had expanded on an ad hoc basis for seven years, and the result was an assemblage of mismatched fonts, quotes, colours and graphics. The text was dense and weighed down with technicalities, or truncated into cascades of bullet points. The links bar at the top of each page emphasised the unplanned nature of the site: when space ran out after seven subheadings, a single subheading for 'Members' spilled over to create another line.

"I guess it was like a one room house that had extra rooms just tacked on here and there and over time it got quite messy," says Trish Messiter, CEO and Director of Business Development for Clarinox. Like the site itself, the company was growing, and needed a more polished image.

Although as an IT company Clarinox was capable of building a site itself, Messiter recognised that a professional designer could bring an expertise in presentation and information flow that Clarinox did not possess. "The benefit of working with someone was to actually get design ideas. The actual coding we could probably do, but we wanted the input for design. We wanted the input as far as the pictures were concerned, but also for the flow."



One of the main shortcomings of the original site was that it rolled out unprocessed information in no logical order. Pages were bogged down with jargon and long lists of operating systems, communication protocol tools and software languages. The 'Expertise' page was an admixture of services on offer - listed in bullet point form and often described in fewer than ten words – and torrents of letters and numbers identifying processors and development tools.

On the homepage, serif and sans serif fonts were mixed together, capitalisation was inconsistent, and the blue of an italicised quote from an industry leader clashed with the predominating green. The logo of a partner company sat isolated in the bottom right hand corner, while an indistinct sepia image was blended beneath four paragraphs of tightly packed text cluttered with nomenclature and system IDs.

It was a real system engineer's approach to the site," says NeoPurple project manager James Greenwood. "The approach was, I want to say all this stuff and I'm just going to say it. There was a basic legibility problem and no communication hierarchy - there was no application of design principles."

For an engineer it was information overload, while for a layperson it was simply incomprehensible. A key issue that Clarinox was keen to resolve was that the site was shutting out business managers who had the financial power to hire the company but could not penetrate the walls of technospeak. Another problem was that the site was attracting the wrong sort of enquiry. Clarinox staff were having to spend a lot of time answering callers interested in buying Bluetooth headsets or hands-free kits – end user enquiries for products the company does not sell.

Above: The 'Expertise' page was an admixture of services on offer.



## Design brief

The main tasks confronting the designers were to restructure the site and give it a new look, while catering for different users and making the text less intimidating.

The brief was a broad one, and packed with subtle challenges. The site had to be informative enough for engineers with a high degree of software literacy, while being accessible to non-technical people. It required a look that was clean and professional, without being too dry. And it would need to explain what Clarinox does, clearly and succinctly.

Clarinox creates embedded software for a variety of applications, from voice communication, to wireless transmission of music and video, to security systems. The company has designed wireless controls for medical equipment, software for consumer electronics such as wireless headsets, and an asset tracking system. Projects it has worked on include developing acoustic shock protection for call centre equipment to filter out disturbing noises on phone lines, adding external communications to hearing devices for Cochlear, and point of sale devices for Keycorp.

The company also offers consulting services, and sometimes undertakes hardware design. While Clarinox's bigger overseas clients usually have their own hardware design departments, its Australian clients tend to be smaller and likely to require both hardware and software development. On one occasion it hired an industrial designer to design a casing for a device, but in general its products aren't tangible or visible, making it difficult to construct graphics to convey the nature of its business. One of Clarinox's services is to develop software development software – a concept hard enough to convey in words, let alone in an image.

As Messiter describes the conundrum, "It's not something that people that are non-technical get very easily but it's hard to say with enough detail to make any sense to a technical person. If you just lump us in with IT they have no idea exactly what we do. But once we start saying exactly what we do it turns off other people who think, 'Oh gosh, that's just way too technical.'"

As an IT company, Clarinox needed a site that suggested both technical competence and professionalism. The site would need to be inviting enough to encourage visitors to explore, but at the same time clean and scientific looking. It would need to work well and be easy to navigate.



## Developing design options

NeoPurple project manager James Greenwood, designer Adam Boal and web developer Jason Stewart, along with Design Victoria facilitator Gary Haywood, sat down with Clarinox's team to brainstorm ideas. Questions that were addressed included what Clarinox does, who was their target market, would the website cater for new and regular visitors, and what Clarinox wanted visitors to do when they used the site. Both Clarinox and NeoPurple came up with ideas that were eventually incorporated into the site, while some features were developed collaboratively.

NeoPurple's approach was to pare back the information and make it flow better, using a less-is-more philosophy. The target audience was divided into two sectors, engineers and managers, with separate messages and language to be developed for each. It was decided that each sector would be targeted directly via boxes on the homepage. NeoPurple suggested that the nature of Clarinox's business could most easily be communicated graphically, via an animated illustration on the homepage.

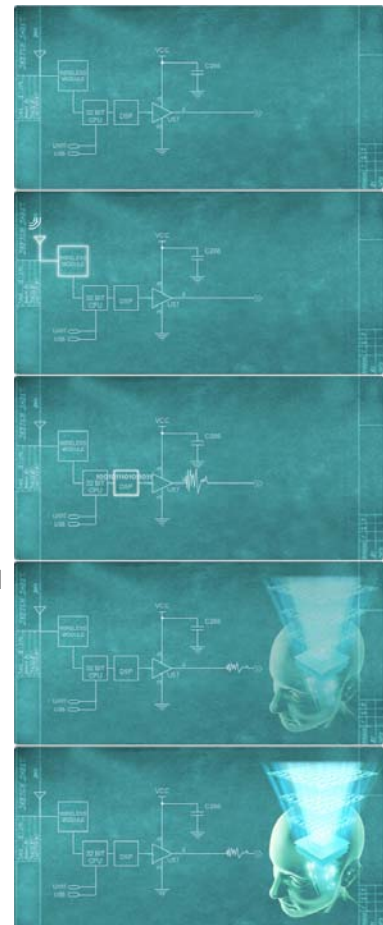
## Graphics

Initial illustration ideas from NeoPurple included using a picture of an electronic device or a printed circuit board. Messiter rejected these because they implied that Clarinox was in the business of selling equipment, and asked for fresh suggestions.

For James Greenwood the eureka moment came when the Clarinox team came up with the term 'digital intelligence'. "Clarinox's original idea was that there's intelligence inside the machine. I thought digital intelligence was a great tagline, and it was that idea that drove our approach, because we thought it would appeal to hardware and software developers, and to business managers."

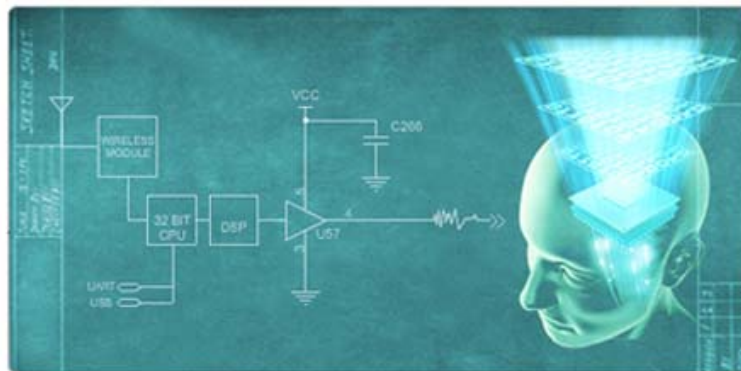
Initial graphics concepts flowed from a whiteboard covered in circuitry diagrams at the Clarinox office – Greenwood describes it as "a bit of an Oppenheimer, mad scientist idea." NeoPurple considered, then discarded the idea of using a drawing on glass, and opted instead for the retro look of an old-fashioned chalk board.

A green textured surface resembles a blackboard with rough chalk markings and a clean white circuit diagram. As the site loads, an animated graphic begins to move through the circuit, first resembling a sound wave, then a set of binary code, and finally an electronic impulse. As the impulse reaches the end of the circuit, it points to a space where an android-like human head appears with a series of circuit boards or microchips whooshing up through it.





The graphic represents a one-step solution to the problem of describing Clarinox's business. "It was quite a hard thing to visually explain - the cross between hardware, software and firmware. Then you have RF and wireless, which are different again," says designer Adam Boal. The blackboard adds a balancing tactile element to a site that is otherwise stark and scientific.



### Digital Intelligence.....

Clarinox's mission is to assist companies developing wireless embedded products or solutions. With multiple platform framework, protocols for many wireless technologies, including RFID, Bluetooth and GPRS, with services to facilitate customised wireless solutions. For organisations of all sizes, Clarinox has the ability to design wireless hardware and handle complex customised applications based on your requirement and your current situation.

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In case anyone has missed the point, to the right of the graphic the words 'Digital Intelligence', highlighted in red, lead into an introduction to Clarinox's services. A section of the blackboard including the circuitry diagram is featured at the top of all but one of the other pages, giving the site a visual consistency.

### Text

The homepage features three introduction boxes, two of which target key audiences. The first, titled 'What we do', is aimed at engineers, and links through to a single page of information about the company's capabilities and products. The second box, titled 'Why us?' is aimed at managers and links to a page with the headline '...to get to market quicker'. The page emphasises Clarinox's ability to provide products that service markets quickly, putting clients ahead of the competition in the fast-changing world of IT.

<h4>What we do</h4> <ul style="list-style-type: none"><li>* Wireless engineering</li><li>* Embedded systems</li><li>* Extensive experience</li><li>* Customer service focus</li></ul> <p><a href="#">Read More...</a></p>	<h4>Why us?</h4> <ul style="list-style-type: none"><li>* Reduce development time</li><li>* Save on your costs</li><li>* Be first to market</li><li>* Minimise R&amp;D risks</li></ul> <p><a href="#">Read More...</a></p>	<h4>What's New?</h4> <ul style="list-style-type: none"><li>* Clarinox Seminar</li><li>* Planning to Build Electronics</li><li>* Melbourne</li><li>* Tuesday 26-May</li></ul> <p><a href="#">Read More...</a></p>
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CLICK FOR APPLICATION BUILDER!

The third box, titled 'What's New?' leads to a page that lists news about Clarinox and contains links to white papers and discussion forums. Each of the boxes has rounded corners, a light grey fill, a



pointed tab at the bottom making it resemble a speech bubble, and a subtle drop shadow beneath. Boal says he added these elements to give a touch of softness to a site that by its nature needs to be scientific and dry.

“It’s techie with an edge of humanness – the round edges take the hard edges off and the drop shadows give a floating feel and a bit of depth,” he says.

The colour scheme was based on Clarinox’s business stationery, using greens and whites to create a sense of cool efficiency, with sparing use of an orange-tinged red for page headers. White is the predominating colour, creating a lab feel, but softened by graduated greys and subtle borders.

With the main messages about the company’s role and competencies made easily accessible on the homepage and introductory pages, the heavier technical information is kept out of obvious view on pages labelled ‘Products’, ‘Services’, ‘Support’, ‘Downloads’ and ‘Case Studies’. These pages are nevertheless accessible from anywhere on the site via a conventional lineup of links at the top of each page. Although the site was reasonably complex to build, navigation is simple and logical.

The ‘What’s New’ section is a readymade place for Clarinox to add new information to the site, in a space that’s accessible from the homepage. This replaces an earlier arrangement where promotional material was split awkwardly between pages. On the earlier site, company press releases were listed exhaustively on the homepage, while media articles about Clarinox were outdated and distributed sparsely at the bottom of the ‘About Us’ page.

Clarinox uses the ‘What’s New’ section to post its own white papers, which other system developers can comment on. Messiter has found that this has allowed Clarinox to start building a community, both by generating dialogue within the industry and by giving visitors a reason to come back to the site. “It gets people to know us and it gets us to know some interesting people. We’ve had a few people want to be beta testers for our software, so it helps to know these people.”

### ***Application builder***


To address the problem of information overload, Clarinox came up with the idea of an application builder. Accessed via a graphic on the homepage, the device is essentially a questionnaire which begins by asking what type of wireless system the client wishes to build - for example mobile computing, smart warehouse, automatic meter reading or digital signage. The client then navigates through four more steps, at each stage using a drop down menu to choose an operating system, a processor, a wireless technology and a hardware configuration. By clicking on the ‘Next’ button at the bottom of the page, the client accesses an email page, enabling them to send their enquiry to Clarinox.





“Clarinox gave us a very complex template, a matrix containing all the information that could be input, and we put it into a format so that almost a layperson could use it. We made it flow better and more simply using principles of information design,” says Greenwood.

English ▾



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SKETCH SH

### Wireless Application Builder

The selection criteria below will help to define the concept when building a wireless electronic device. Fill in and hit send, or contact the Clarinox team, to guide you through the process of defining the concept, preliminary technology selection and identification of the main components, both hardware and software, that will be required to meet your design objectives.

▶	System	No Preference/Not decided ▾
▶	RTOS	No Preference/Not decided ▾
▶	Processor	No Preference/Not decided ▾
▶	Wireless Technology	Bluetooth <input type="text" value="Select"/> ▾ GPRS <input type="text" value="Select"/> ▾ RFID <input type="text" value="Select"/> ▾ Low power RF <input type="text" value="Select"/> ▾ Other <input type="text"/>
▶	Hardware Configuration	No Preference/Not decided <input type="checkbox"/> USB host <input type="checkbox"/> USB device <input type="checkbox"/> UART

English | Chinese
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By using drop down menus the page eliminates the need for long, confusing lists of system configurations. Instead, the user is presented with a logical sequence that is clean looking and easy to navigate. The graphics on the page distinguish it from the other, information-based pages on the site. The blackboard runs across the top of the page but instead of a circuitry diagram it uses a line graphic suggesting the pieces of a jigsaw puzzle, adding a playful explanatory element. To the left of the application builder, another blackboard contains tabbed boxes similar to those on the homepage but configured to resemble a flow chart. The text in the boxes reflects the sequence of steps used by the application builder, reinforcing the logic and simplicity of the device.

Rather than alienating the user with surplus information, the application builder serves as a call to action, motivating the client to contact the company with an enquiry that can be handled quickly and easily.

“The application builder is almost like a teaser – to get people to think, ‘If I want to put a system together, I wonder if Clarinox can build it.’,” says Greenwood. Messiter says that the application builder is now attracting about one serious enquiry per week – a good result.

### Overcoming technical hurdles

The project evolved as it progressed. While Clarinox had originally wanted the entire site to be built by NeoPurple, the designers suggested it would be better to create a template that Clarinox could then populate with its own copy. Technical issues arose from the incorporation of an open source content management system (CMS) which created a number of inconsistencies in the site, particularly when viewed on Internet Explorer 6.

Using her knowledge of IT, Messiter worked closely with web developer Jason Stewart at NeoPurple to ensure the site matched the company’s requirements. The direct collaboration between client and designer was unorthodox and created delays, but led to a product that both parties are happy with.

While initially reluctant, Messiter is now pleased with the flexibility of the system. Although it meant more work for Clarinox at the time, the incorporation of a CMS means that Clarinox can upload fresh material without having to rewrite the site’s code. That includes foreign language versions. The site already has a Chinese incarnation, accessed instantly via switches in the top right and bottom left corners, and translations in Turkish, Japanese and Korean are in the pipeline. For a small company like Clarinox, with a staff of three full-timers and four part-timers, the ability to update the site easily is a boon.

Another aspect of the site that required deft technical work is the menu bar at the bottom of each page. The bar, which contains links to the homepage, site map, legal & privacy pages and a switch to alternate between languages, stays visible in a fixed position at the bottom of each page even when the page is long and requires scrolling. The tool required time and technical skill to create, given the use of the CMS and the need to make the site work across a number of browsers.



“It’s a nice little touch. It’s not out there in your face, but some people would notice,” says Messiter. Because Clarinox deals with IT people, it was essential that the site work well from a technical point of view. “We wanted it to convey a level of technical competence, to give people some measure of trust or comfort that we’d actually be able to do what they need done. We wanted something that worked because otherwise it would imply that other things don’t work.”

## Summary

The design process was more protracted than either side desired because of initial misunderstandings about the nature of the project. The facilitator was crucial in working through miscommunication and both parties are pleased with the end result. Clarinox has a site that it can easily manage on its own, and that presents an image consistent with its business. Inappropriate enquiries have almost completely stopped, while the site is now attracting more business enquiries and developing a critical mass of visiting experts.

“We’ve got less information but people are finding it now,” says Messiter. “We’re getting more of the enquiries that we want to be getting.”



Above: Clarinox’s new website homepage