

The new external signage system at Coventry University:

A proposed remedy to the problem

Report by

Haitham Razagui

In support of the artefact

Supervisor: J. Bleetman

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Introduction

As shown in my dissertation, the new signs on Coventry University campus are ineffective as a wayfinding aid, especially when being relied upon to find one's way round the site without the benefit of any additional wayfinding information.

There were also other usability issues with regard to the layout and presentation of information, as well as the placement of some signs.

The surprising findings of the dissertation were the reasons for the failure of the signs – the naïve and bureaucratic way in which the university went about commissioning them.

This project sets out to address the problems with the signs, and propose a new system that is superior in terms of usability and cost-effectiveness. The new system must still satisfy the university's original criteria and not exceed the original budget too drastically.

The artefact takes the form of a sign specification document, detailed enough for a sign manufacturer to produce the signs, yet simple enough for an Estates Manager to understand. Audience considerations include those who would use the signs and the above-mentioned people who will use the specification document itself.

During the research for this project, further disadvantages of the signs were uncovered, making the scope for improvement even greater.

Research

This section explains the process of research for this project, and how each development led to the next.

Research for this project has been mainly practical, as the academic research has been carried out in the dissertation. Short of physically constructing new signs, this project is essentially of a practical nature.

Now that the problems with the current signs are known, it is possible to set about addressing these problems by specifying criteria for the new signs. However, there are limits to what is achievable, and the aim is to produce the best solution within these limits. First, we must determine what these limits are.

One of the main limits is the budget. The current signs are monoliths, widely regarded in the sign industry as the expensive option “If your customer will not pay for a full monolith, consider offering him a plate and post sign instead. When used full height this can look very impressive at a fraction of the cost.” (Ashby Trade Sign Supplies Brochure, 2003). The monoliths do look upmarket, therefore meeting the University criteria. The disadvantage to the monoliths used is that the hollow, curved structure, though quite strong, can be dented, as has happened. Another disadvantage is that the whole fascia must be redecorated, should any changes to the information be required. The logistics alone (removing and transporting a 2 metre x 1 metre piece of metal) make this a costly process, without taking into account that the whole thing must be refinished, due to its anti-vandal properties.

To find a method of sign construction that is stronger and easier (therefore cheaper) to alter, whilst costing no more (preferably less) per sign than the current system requires contact with sign manufacturers. The trade fair “Sign UK”, held at the NEC from 20-22 May, presented a good opportunity to this end, albeit at quite a late stage in the timescale. However, no signs can be designed unless it is certain that the designs can be made a reality.

Sign UK revealed that a modular system could easily be made to look as upmarket as the monoliths currently on campus (see picture). The construction method also meant that it would be difficult to dent or damage the sign (each module has internal reinforcement). The modular system is also versatile - modules can be added or removed and individually changed.



Most of the companies at Sign UK supply sign systems to sign manufacturers, who then paint, print and produce signs to the client's specification. Adding a "middleman" to the equation in this way could mean that the costs would be higher than a company that produced everything in-house. However, the commonality of the systems between manufacturers means that the same manufacturer does not have to be used every time. For example if a module requires changing, there is a choice of companies who can do the job.

I was informed by Dave from sign supplier Spandex that WSI (the company the University used) were one of the more expensive companies, and that they only produced bespoke signs, meaning that the client must return to them every time a change was required.

I was impressed with a Yorkshire based company called Durable Signs. Their innovative Durable One process produces signs that are almost indestructible. In fact, they guarantee their signs for 10 years. They make mainly bespoke signs, but can apply their indestructible finish to modular systems from third parties. However, the benefits of ordering third party modular systems through Durable signs are lost due to the fact that the Durable One finish is only available through Durable Signs. It is therefore more cost-effective to use one of their bespoke systems.

With it possible to produce an upmarket modular system, the design of the signs has to be researched. One of the most outstanding failures of the current

signs is that only the building names are given. In addition to this, the text size is very small. The challenge now is to design signs that are not physically a lot larger, yet can contain more information in a more acceptable text size. This can only come about from making several revisions of a basic sign design.

During my work placement at Enterprise IDU, I spent most of my time working in the wayfinding department. I returned to Enterprise IDU to refresh some of my knowledge, and to ask for advice on sign design. I learned that the anti-vandal finish on the current signs is far too glossy (borne out in some of the photographs of them taken with a flash). Enterprise IDU recommends a maximum gloss factor of 15%. I later found that the coating on the current signs is 100% gloss.

Alison at IDU recommended using symbols on my sign designs, for example a book, to signify the library. She also helped me with designing the sign specification document and offered to keep a dialogue with me as I created the designs.

It took a long time to come up with the final design and get it right, but the full specification could not be produced until it was definite that the design could be made a reality, and that this would not be too expensive. An obstacle that needed to be overcome was that sign companies may not be willing to deal with a hypothetical student project in the same way as they would a real client, so I pretended to be a consultancy working on behalf of the University in order to be treated with some credibility.

I emailed an EPS file of my design to a number of companies, requesting feedback on whether it could be achieved, and the cost of manufacture. Unfortunately, only Durable Signs returned a quote quickly. At the time of writing, Algar Signcraft vaguely put that a double-sided sign to my specification would cost "less than three grand" to produce, though they were very helpful in guiding me through various manufacture processes, with their pros and cons.

The lack of response before the deadline could have been due to Sign UK being held with only a few weeks to go, or that I was not credible enough in pretending to be a consultancy.

I needed to find out the cost of the original signs, to make sure my designs could be produced within budget. Some of my solutions to the problems were to include some wall-mounted signs, and I was toying with the idea of having some protruding signs, and a finger-post sign for behind Sir Frank Whittle Building, where the existing sign is perpendicular to the direction of approach and therefore almost invisible. I also needed to see some other examples of sign specification documents. For these reasons, I revisited Jeff Wells, Assistant Director of Estates at Coventry University (whom I visited as part of my dissertation research). Again, he was candid and very helpful. He agreed that wall-mounted signs would work, saying that when some more money became available, he would consider installing some. The finger-post idea was discounted by both of us because consistency within the system would suffer, and that any protrusions may hinder cars parking, and the lorries that passed the site in question. When I showed Mr. Wells my designs, he said he liked them. He also emailed me a PDF of WSI's sign specification document for the existing signs. He also told me that the double-sided monoliths cost £2,700 and that single-sided ones cost £2,365 and that installation cost £300 per day.

The result of all my research means that I can design a modular system, including wall-mounted signs. The system must cost less than £2,700 for a double-sided sign and £2,300 for a single-sided sign.

Durable signs quoted £986.07 for a sign, with a 12% discount for orders of 10 or more signs, bringing the price per sign down to £880.42

Durable signs are able to produce signs in a semi-matt finish. Discussions with other sign manufacturers revealed that the only way to make the signs anti-vandal would be to apply a 100% gloss finish, like the current signs. Of course,

this is unacceptable, so, coupled with the fact that Durable Signs are the only company I spoke to who could finish the signs in semi-matt, yet be vandal proof and the only company who bothered to get back to me with a proper quote on time, I recommend them as the sign manufacturer. They also advised that the slats had to be a minimum of 100mm tall (my original design had 90mm slats). For these reasons, my final designs are based on Durable Signs' product. Unlike most of the other sign companies contacted, Durable Signs do not install the signs, instead recommending that a local contractor should do the work.

Once the basic sign design was decided, and it was clear that it could be produced at a good price, the signs themselves could be designed. The campus was given a thorough walk-through to decide on positions for the new signs (it was deemed that more signs were needed, and could now be afforded due to the low price quoted by Durable Signs).

User considerations are multi-layered. There are the users of the signs themselves, comprising of visitors to campus. There are also the users of the specification document, being the sign manufacturer and the Estates Manager and any other people involved in the decision-making process regarding the signage project.

The difference between the WSI and the IDU specification document is that WSI are specifying for themselves and the decision-making audience, whilst IDU are specifying for third-party sign manufacturers. For this reason, WSI's specification is less technical, as they may have a separate document for their manufacturing division, or because they produce bespoke signs, do not need exact instructions from themselves. IDU, being primarily an Information Design company, have designed their specification to be usable and technical. For this reason, my specification document borrows a lot from their model.

Because the signs being specified are all large external signs, the document is A3 landscape, in order for the designs to be represented at 10% of their

intended size. The WSI specification document shows the signs at 5% on A4 portrait, which makes evaluating the detail difficult. The impact of this would be even greater when trying to illustrate a modular system.

The design of the signs themselves attempts to address all the problems found in the usability test of the current signs from my dissertation. Extra advice from IDU has also been implemented, such as the use of symbols (for example a book to signify the library). Aspects of sign design have been gleaned from knowledge gained on my placement, as well as:

- Wayfinding: People, Signs and Architecture by Paul Arthur and Romedi Passini
- Wayfinding: Guidance for healthcare facilities by Colette Miller and David Lewis

Project management

When planning the project, I tried to develop a way of tracking my progress and whether I had met my goals on time. I produced a colour coded plan, using Excel, in which tasks are given deadlines. Each deadline that has been met is colour-coded green, with those overdue coloured yellow. Deadlines not yet reached are left white. The plan contains all the stages of the project and a vague order in which they should be done. This method of planning proved useful for making sure I had done everything, especially towards the end, but is not detailed enough. This is proven by the number of scraps of paper containing lists of tasks that were produced during the course of the project. Amending my planning method was not a priority whilst grappling with more pressing aspects of the project, so it remained the same, as I worked around its failings.

I planned quite tightly and gave myself a lot to do, so everything was achieved within less than a week of my deadlines. The advantage to my project

management was that I was able to do a little at a time, which is something new to me as I usually use the final deadline as motivation to get everything done, leaving things to the last minute. I was able to compensate when things went wrong, and give myself well-needed and regular breaks from the computer. My stress levels have been a lot lower than when I was doing my dissertation, except at the early planning stages before the project really got going, when I could see no light at the end of the tunnel.

My plan was easy to follow, as I knew vaguely what needed doing, with each situation I encountered presenting its own need for mini-planning (which went undocumented, apart from the above-mentioned scraps of paper). The plan was effective, as I may well have missed out on some attention to detail, had I not printed a large copy of it and kept it on my desk, scribbling on it as I progressed. As somebody who has never really planned anything before, I have really seen (and reaped) the benefits of planning. Although my efforts could hardly be described as advanced project management, for me it is a big step. I fear it is a bit late in my academic career to have discovered this, for I would like to expand on it further over time.

Usability

Having usability tested the current signs, the needs of the new system had been established. New sign systems are not fully usability tested before implementation, as it is too expensive to install them, only to take them down and amend them. However, there are ways of testing, such as was done in the Non-Empirical test of my dissertation whereby the signs are checked against criteria set out in current material on wayfinding.

In addition, to ensure the typeface and type size were readable, parts of the sign, printed at full size were produced, then attached to a wall. Different type styles were used until the one with the greatest viewing distance was achieved. Three people were used to ascertain this, with the typeface Swis721 being

deemed the most legible. Because the signs are currently a greyish silver colour, one sign design that was totally silver was tested against one that had a blue background. Superimposing the signs against their background using Photoshop showed the aesthetic impact of the signs, but also helped decide which colour scheme was most legible. Asking people without a background in Information Design led to the blue signs being most popular by only 6 to 4. Asking a group of information designers, the unanimous vote was that the blue sign was clearest. Alison from IDU also agreed that the blue sign had the highest contrast, and would be most visible to those with visual impairments.

To make sure the blue sign was superior, the same test with full-size prints of parts of the sign was used. Indeed, the blue background with white text was far superior to the black on greyish silver, though it was impossible to reproduce the silver on a printer. Nevertheless, the large difference in viewing distance of white-on-blue (even greater than originally using black-on-white to choose the typeface) made it the obvious choice. Other colours were not considered, so as not to contravene the University's corporate colours.

With the usability and legibility of the signs themselves accomplished, their location had to be chosen. A detailed walk-through of the site was conducted, with a map of the campus used to mark where the user felt a sign should have been, where it was omitted or was inappropriately placed. Unfortunately the building works near Sir William Lyons Building meant that this part of the campus could not be tested. Photographs were then taken of all the locations cited, in case it was necessary to superimpose a sign onto it for testing. Fortunately, all chosen sign locations were used after finding that the cost of producing the signs in this number would be well within the budget. The artefact contains specification for more than twice the number of signs currently in place.

During the sign design process, a constant process of usability took place; as the map was used as a "virtual walk-through" in order to emulate the needs of

the user encountering the signs. Some routes were consolidated, particularly wheelchair routes – there is a greater use of the wheelchair symbol on the signs in the artefact than on the current signs. The current signs seemed to direct wheelchair users on to alternative routes early, whereas the new system will allow the wheelchair user to follow the able-bodied route until it is necessary for their route to change, in which case a sign notifies this. The increased sign density on the site helps this.

When the “virtual walk-through” was not enough to create some signs effectively, it was easy to return to campus in order to consider the options, thanks to where I live in relation to the site, although in a real situation this could be difficult. In a way, my signs benefited from my being close to the site.

Evaluating current sign specification documents from IDU and WSI, I decided to produce my sign specification in A3 landscape format. I placed a contrasting white-on-black margin down the right side of each page, giving the sign number in large type, for easy navigation of the document, with at-a-glance convenience. All the information is in this margin, unlike the IDU document, where it is at the top and side. The WSI document has information on the left and right of the designs themselves, which proved distracting. WSI also used too many abbreviations and distracting colours. My black border proved concise and does not detract from the design of the signs themselves.

I decided to omit naming the sides of each sign, as WSI have done. WSI label the signs Front and Rear. What makes one side of a sign the front? With the differing orientations of the signs, this confuses the matter. The thinking behind installing these signs is that it would, in many cases, be obvious which direction the signs should be facing. The installation in this case would be supervised, either by the sign designer, or someone from the University, to make sure they are done correctly. All the sign companies who responded to my request for a quote and feedback (with an EPS of some of the artefact attached) understood the format.

Reflection

As mentioned above, I have learned a lot about myself through some limited time management. I have realised how having some structure to the way I work has made this large project less stressful than past, smaller projects.

I have enhanced my networking skills, and talked to people on a business-to-business basis in order to make my project as realistic as possible. I even bought a domain name so that I could have a credible email address for correspondence. I feared that I would not be taken seriously and would have got different answers, had I revealed that I was working on my student project.

Of course this project has to be hypothetical and the procedures for completion cannot match those of a real-life situation (for example, it is not possible to make proposals to the Board of Governors and amend the designs accordingly). Also, access to some of the resources afforded to a real project manager has been difficult, such as office facilities and meetings with sign company reps to go over my designs. I have, however, been lucky enough to take advantage of the excellent printing facilities at my workplace.

During the project, I refreshed my sign design skills, and stretched them. I had to take advice from Alison at IDU, after forgetting some of the functions in Adobe Illustrator. I also learned some new Photoshop skills in superimposing my signs onto photographs, to make sure they looked right in the context of their surroundings, and for the purposes of usability testing.

In my artefact, I have omitted to include the You Are Here maps on those signs intended to display it. Instead, I have simply written, "MAP" on those signs. My software and illustration skills do not stretch to drawing a map that would do the

signs justice. I know what would make a good map, but cannot put this into practice. I would suggest that the map used on the current signs could be used, with modifications including the addition of street names, and the addition of what is in the buildings listed. Had I the time, and it would require a lot, I would have designed the maps to go on the signs.

Had I more time, I am sure I would have received more feedback and quotes from sign companies, and perhaps found a superior system to Durable One.

My specification document specifies colours as Pantone Coated, whereas sign manufacturers prefer RAL or BS colours. I could not find out how to access these colours in the software I used. However, from working at IDU, I do not remember ever specifying RAL or BS colours. The subheading for the colour specification in the artefact "For an accurate colour match use an official Pantone swatch" is taken from an IDU sign specification document. I would have preferred to find out how to do this properly.

If I could do the project again, I would not rely so much on Sign UK to provide me with contacts for sign companies. Had I researched them more thoroughly before the exhibition, I may have had responses from more companies by now. I expect them to flood in well after the deadline as a result. That said, the exhibition was a great experience, being officially a trade only event. I was pleased to be taken seriously by the exhibitors, despite being the only person in the place not wearing a suit or even remotely dressed smartly. Those who I spoke to all were pleasant, helpful and friendly and therefore more approachable over the phone and email after having met them in person.

I would have liked to explore more options and developed Sign 16 further (see artefact) as I fear it may be almost as useless as the current sign. The information is quite high up the sign, but modern cars are quite tall, not to mention 4x4 vehicles or vans. As it stands, it is, like the current one, perpendicular to the direction of approach (for the side facing Sir Frank Whittle

Building), but my design is double-sided - so that provided no large vehicles are parked in front of it, there is a degree of use to it. This sign is hard to position and can probably be omitted altogether. As previously mentioned, I experimented with finger posts and protruding signs. An option is to move the sign so that it is visible by people passing it, though land ownership issues may arise here.

Matching the sign colours to the current ones (and therefore the university's corporate identity) was difficult, though finding out the official corporate colour (only referred to as "Corporate Blue" in the WSI specification) would have involved contacting some rather unhelpful departments within the university. Placing the official university crest on the designs would have been desirable for illustrative and cosmetic purposes, though the above-mentioned departments forbid this.

The artefact is in as close to its final form as I could realistically have made it, though in a real-life situation it would probably only be the first version, as the client and sign manufacturer would review it and return any amendments. Nevertheless, the artefact as a document should by all means be ready to be sent to a manufacturer, who would be able to produce the signs from it. (The EPS files of the signs would also be sent electronically).

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