

Chapter 13

Mobility and Applications: “It’s The Audience, Stupid”

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The Wall Street Journal Online

1. INTRODUCTION

Let me begin with a simple confession: I really don’t care that much about the success of 3G. In fact, I have another confession: When it comes to technology, I want it to go away. Enough already.

As a representative of one potential exploiter of this technology – as a publisher of business news and information seeking to serve customers whenever and wherever it makes sense – I do have to come to terms with questions, such as: Will 3G further advance our ability to serve our customers in ways that satisfy their needs at reasonable cost? How will better, faster wireless access change consumer expectations with regards to electronic information and related services?

I have spent the past 15 or so years trying to figure out what forms of electronic delivery of business news and information will be compelling enough to attract a sizable audience of customers – particularly those willing to pay for such information delivered electronically.

Because as one looks for clues to what will make 3G successful, one has to look to the mobile applications that will be compelling and have sufficient value to drive usage. One also has to look at how user behavior is changing or will change as the technology becomes available. It is not enough to say,

“the technology exists, we can build it and they will come.” I think several billion dollars in venture capital thrown at Internet entrepreneurs proved that.

2. THE WALL STREET JOURNAL: GOING ONLINE

I think back to a time in 1993 when we first began to contemplate the creation of an electronic version of The Wall Street Journal. Why 1993? What was happening at that time that sparked our interests in an online journal.

Dow Jones had been operating electronic information services for decades. We'd been selling access to corporate librarians, information specialists, analysts and private investors willing to learn the arcane techniques for accessing our computers through packet-switch networks and searching our mainframe databases. We'd long searched for ways to broaden our audience to the larger population of businesspeople. For instance, I worked on one of the first natural-language search systems, which at the time required a massively parallel supercomputer to do something done millions of times a day on the Internet today with standard computers. That project, though technologically quite sophisticated, failed most likely because of its user interface and its inability to meet customer expectations.

As an aside, I'm often struck by how similar some of today's wireless and other applications are to the awkward interfaces we had back then. For several years, we continued to maintain a 32-character-wide screen display for our main news services. They'd been built at that width in a time of narrow computer screens but by that time 80 characters was the standard display width for text. Yet they remained narrow. Back to the future, I suppose.

Which makes that period particularly relevant to the wireless industry as it grapples with today's cellphone displays.

In any case, a number of forces began to align in the early 1990s.

- PCs and modems were arriving in growing numbers on business desktops and in homes.
- America Online, in particular, demonstrated that easy-to-use online services could attract a large audience of users.

- Microsoft joined the graphical user interface bandwagon with the introduction of Windows, opening the way for more visually interesting on-screen presentation. Some of our business partners even began showing how they could parse our feeds of Journal articles and recreate something that looked a bit like a newspaper.

Note that I don't mention the Internet. In those days, the net was still found largely in academic and research institutions – hardly the province of the kind of business users we sought to attract.

I spent a fair amount of time in 1993 working with Visual Basic to develop a demo of the kind of electronic Wall Street Journal that I thought would appeal to customers. We began showing that demo around the company to editors and executives (compare Figure 1).

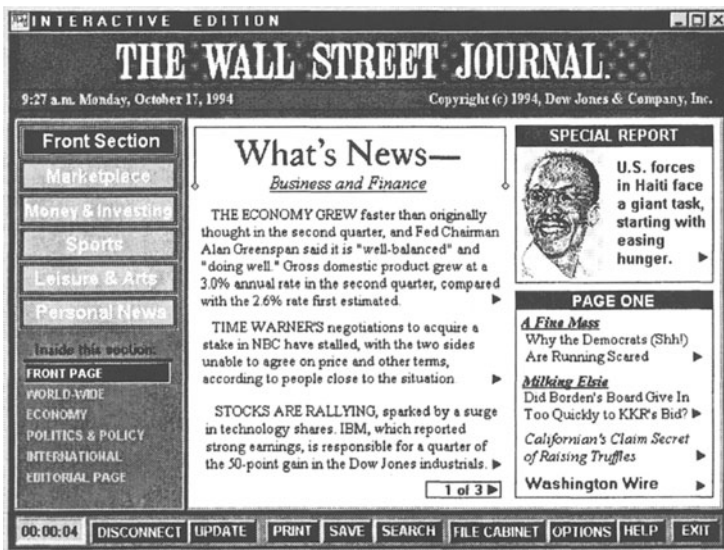


Figure 1

I recall after one such demo sitting aboard the company helicopter flying from New York back to our offices near Princeton. Keep in mind that Dow Jones is a company dominated by The Wall Street Journal and populated by managers who came up through the ranks of reporters and editors. So, it was telling when one senior executive leaned over to me and said, "It's just so journalistic."

Creating on a computer screen a product that looked and felt more familiar to people steeped in newspaper publishing certainly helped

win support for this new form of electronic publishing within Dow Jones. But it wasn't just publishing executives who responded to the "journalistic" nature of the prototypes we'd built. Over the coming months, as we began to refine our plans for an online Journal, our research with customers confirmed that maintaining some of the familiar look of the newspaper while exploiting the strengths of the online medium would create a powerful combination.

We would not be the only ones to recognize that the visual aspects of the user experience could play a significant role in adoption as well as ease of use.

3. THE IMPACT OF THE GRAPHICAL USER INTERFACE

Consider the World Wide Web. The system for hyperlinking information had existed for several years before the invention of the first browser. Back then, it looked something like this (Figure 2):

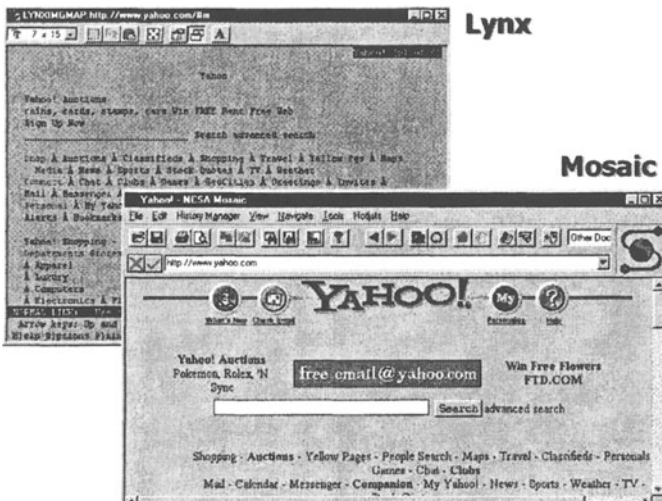


Figure 2

And you thought WAP interfaces were ugly.

Then came Mosaic (Figure 3).

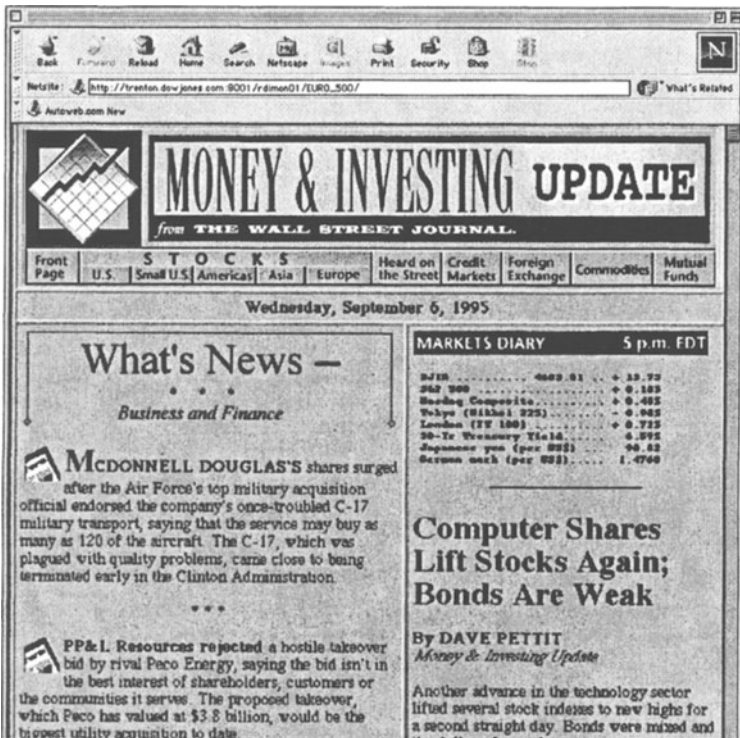


Figure 3

The arrival of a graphical user interface to the Web transformed the Internet. Even with just the limited ability to have different size type and clickable links, the possibilities of this becoming a viable commercial publishing channel began to become apparent.

At the time, I'll admit that wasn't my first reaction. After all, we already were deep into developing proprietary software to deliver on our vision for an online Wall Street Journal. I stopped to visit another Dow Jones employee in his cubicle. I peered over his shoulder at his computer to see what he was

working on. It was HTML, he said, explaining it was how he created a page for the Internet. He showed me what the code looked like when displayed in Mosaic. I was not impressed. The software we were developing would be far more advanced, I assured him.

Fortunately, our focus wasn't just on technology. It was on understanding our potential audience. It was on figuring out what would make the Journal valuable to a subscriber in an electronic format. It was on figuring out how to translate the power of The Wall Street Journal into a new medium. The technology we'd use to accomplish our goals was somewhat secondary, even it was consuming most of our time.

By late 1994, however, we couldn't escape a vital technology decision. Our project plan suggested that it would be two more years before we could launch our own software. We realized we could go one of two routes – keep developing our proprietary software or switch to the Internet and its open standards. We didn't have the resources to pursue both paths.

We knew the Mosaic of 1994 could not touch the level of sophistication we planned for our software. The Internet in 1994 did not offer the reliability and ease of use of a proprietary network.

But we couldn't think in terms of 1994. We had to project out several years. In the two years or more that it would take us to complete our software, how would the Internet change? How rapidly would browsers evolve while we were trying to release proprietary software and then get out upgrades to it? If we continued on our own path, would we be ahead in two years or behind? We had to consider where the future would lie to understand where to invest our energies in the present.

It was clear that the Internet and the Web were drawing the energies of the best and brightest developers. One could expect rapid advances because of the growing number of people and companies racing to exploit this technology.

So, in early 1995, we switched all our energies over to the Web, launching our first site that summer and following it up with the full Wall Street Journal Interactive Edition the following spring (Figure 4).



Figure 4

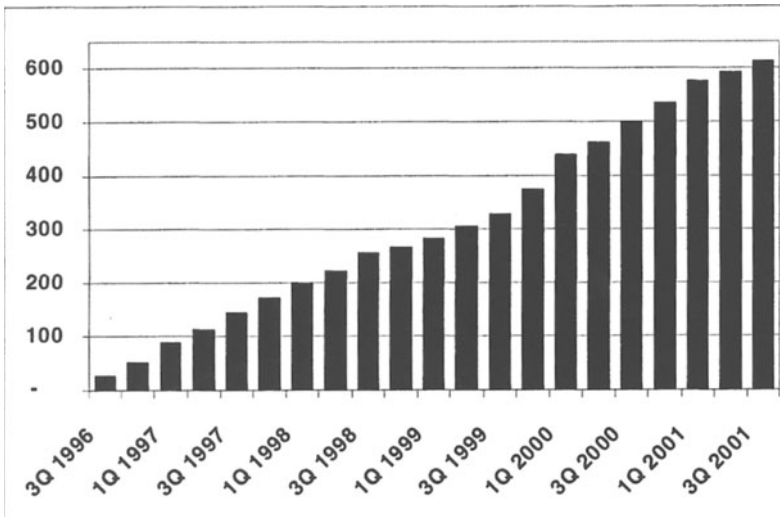
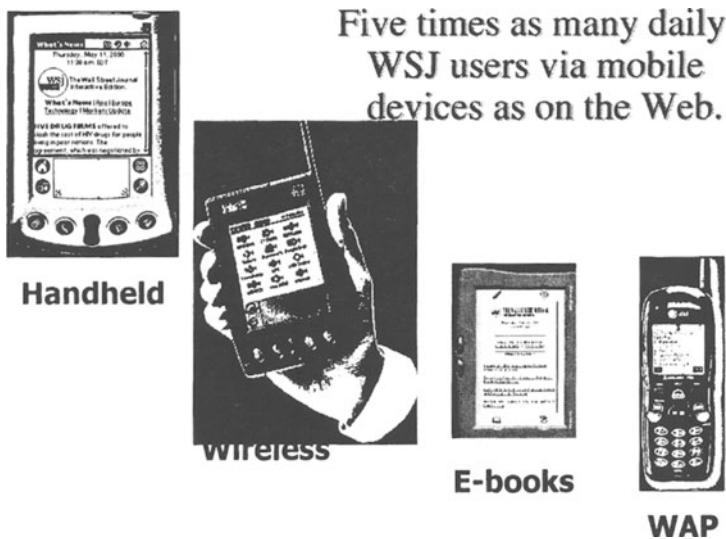


Figure 5. Paid subscriptions: 609,000 as of Sept. 30

We included the full contents of all editions of the print Journal – US, Europe and Asia. We also included much of the real-time news content of the Dow Jones Newswires, adding about 1,000 articles a day to the site (Figure 5). Later in 1996, we began charging a subscription for access. A mere \$49 per year (later raised to \$59 and now \$79). But even that modest fee was controversial at the time and for much of the next several years as the Internet bubble inflated.

Still, we stuck with our business model, confident that, over time, the audience we sought to serve would see the value in the depth, breadth and timeliness of our news. Five years later, we have more than 600,000 paying subscribers (Figure 6).

Figure 6



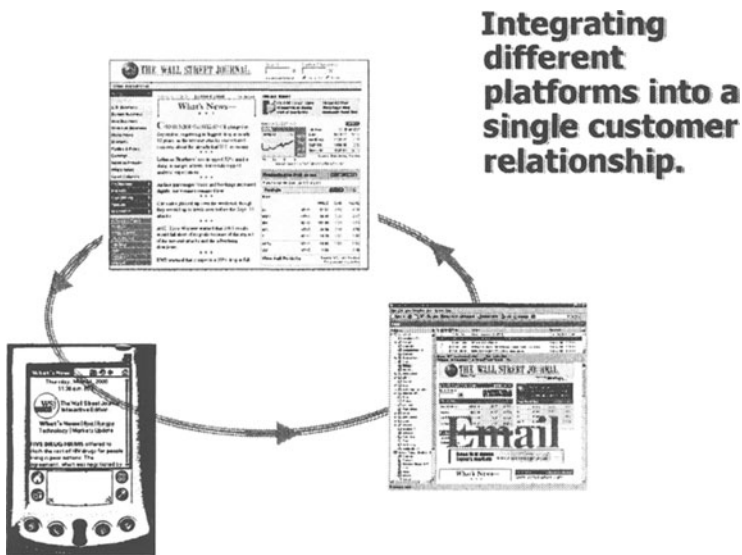
This is hardly the sort of “hockey-stick” curve that drove many Internet business plans. Nor is it the kind of rapid adoption that those who’ve paid out billions of dollars for 3G licenses will need to recoup their investments. But as we contemplate what sort of applications will drive value-added services on new wireless platforms, it may be instructive to consider the effort that must go into building a sizable audience for such subscription services.

4. THE WALL STREET JOURNAL: GOING MOBILE

So, how can our experience on the Web translate to the mobile arena?

We already have substantial experience in the mobile arena through deals with AvantGo, Palm and Omnisky as well as some e-book companies. I normally include a WAP phone on this screen, but it is admittedly a small piece of the mobile activity. In fact, we serve five times as many people daily through various mobile formats as we do on WSJ.com on the Web (Figure 7). Why is that?

Figure 7



Ironically, while some publishers are looking to mobile access as an opportunity to charge – finally - for the same content they readily give away

on the Web, we have long provided free access to a slice of our content through many mobile devices even while charging on the Web. Why?

We believe that the value of the product is in the depth and breadth and timeliness of our content and its skilful packaging. On the Web, we can provide access to the full range of Journal and Dow Jones Newswire content, continuously updated. We can surround it with in-depth background on 25,000 global companies. We can include personalization and search capabilities.

For smaller devices and those with slow-speed wireless access, we recognized that the appropriate product *was* one that offered a small slice of news. These devices *were* better suited for quick updates on the news, not for extensive reading. The key words there are “was” and “were.”

The world is changing, and mobile devices are becoming better suited to reading. Screen displays are better. Bandwidth is improving. Tablet PCs – lightweight, powerful and easy to read – are just around the corner. And we plan to follow with more complete services for our paying subscribers, including full access to articles, portfolios and searching.

Over time, we see the difference between wireless and fixed-line access continuing to diminish. Publishers who look at wireless as an opportunity to charge for content are, in essence, saying that the value is in the form of delivery and the mobility. We say the value is in the content, and when we provide the depth and breadth of our content to mobile devices, customers will pay for it as they have on the Web. And that is what we believe 3G and other technologies will help to foster.

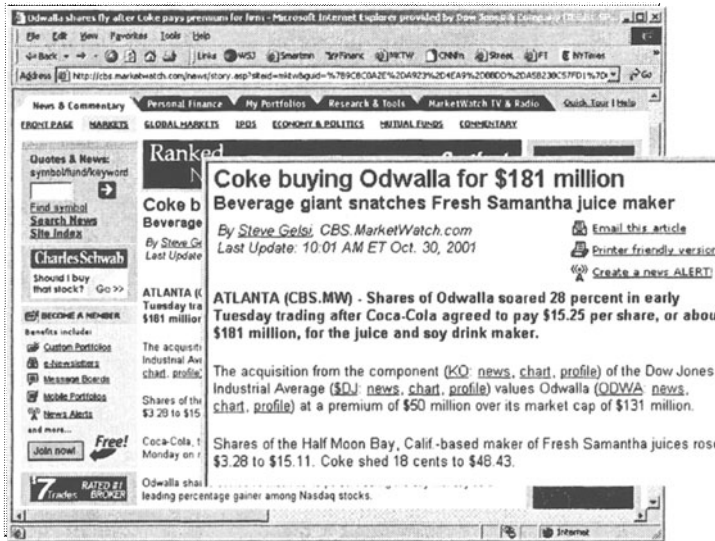


Figure 8

More important, we believe that we should move toward a more integrated approach to the customer relationship (Figure 8). Today, we treat the Web, our mobile offerings and even some email as separate products for which you sign up separately. Going forward, we believe a customer should be able to use any device to take advantage of their Journal subscription. Sign up on the Web and establish your personalized settings. Download personalized news updates to a PDA before heading home on the train. Check a stock quote from a cell phone and then request an in-depth report on the company be sent to your email.

The challenge of this is in making the technology go away. I don't mean that we should live without technology. But I want it to fade into the background. I don't want to think about the technology of how information is received any more than I think about the technology when I turn on my television.

One example. A great form of mobile access to information is audio. We've worked for a number of years with Audible and other companies to provide a 45-minute daily program recapping the contents of the Journal. It's available for download early each morning. I'd love to have that in my car as

I drive to work. The problem is that the process required a PC on the Internet to download the files, which then had to be loaded onto a device that could be taken in the car and plugged into the tape player. I used this off and on for a few months but finally abandoned it. But if my car radio could download or just play that content without all the extra steps, I'd still be a regular listener. We've since licensed that content on OnStar, so perhaps we are getting closer to direct access in the car.

What are the lessons for 3G?

The services built on it must be open. To achieve a satisfying customer experience, different channels must be integrated and that requires open access.

The bandwidth initially will go more for improvements in interface and presentation than to video. It is more important to achieve a rich, easy-to-use experience. Video may have a role in entertainment, but less so in conveying information.

The handset screen won't cut it. Larger devices will drive greater use of mobile bandwidth.

The bursting of the Internet bubble has allowed us all to settle back to the basics. Instead of chasing technology for technology's sake, we can work harder to exploit technology to help customers. That is where our focus remains.