

HOW THE INTERNET IS TRANSFORMING TEST AND MEASUREMENT

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ABSTRACT

The Internet will have a profound effect on the future of the test and measurement industry. Web-based communication of data will become more commonplace and more important to engineers as they are required to share such information. The Internet not only automates measurement procedures but also allows the information to be shared on a global scale. Users can achieve efficiency that has not existed before.

The Internet both as a sales tool and a separate sales channel will continue to drive down costs and increase productivity. Today's more advanced online commerce environments give a prospective customer the power to evaluate equipment for performance and options, comparatively price products, configure instruments, determine availability and choose from sizable databases of new and used equipment for rent, lease, and purchase.

Keywords: test, measurement, internet, web, procure, online, marketplace, e-commerce, purchasing, transaction

1 HOW THE INTERNET IS TRANSFORMING TEST AND MEASUREMENT

Like a master musician and his instrument, engineers place a lot of faith in the test and measurement equipment so vital to their work. It's not difficult, then, to understand the reluctance of some professionals to resist acquiring equipment, sight unseen, through the Internet.

Much has changed, however, to make the Web a more secure, friendlier, faster, and more informative place to place to find and procure test equipment. Among the most important developments is the rise of stable, successful online marketplaces providing research, product comparison, and equipment evaluation capabilities that go far beyond a virtual store.

Today's more advanced online commerce environments give a prospective customer the power to evaluate equipment for performance and options, comparatively price products, configure instruments, determine availability, and choose from sizable databases of new and used equipment for rent, lease, and purchase.

Of course, it remains true that no digital medium can replace skilled engineering consultation. Online test and measurement equipment marketplaces will have to reconcile the potential of online resources with the personal touch and technical expertise that only real people can provide. This is the challenge of an online test and measurement equipment marketplace. It is also the challenge of e-commerce in any industry.

2 BIG BREAKTHROUGHS AND BENEFITS

The evolution of the Internet brings two significant changes to the equipment purchasing process. First, it creates a marketplace with new rules — where consumers reap the benefit of competitive new marketing and distribution methods. Second, it presents an opportunity to centralize a purchasing experience. The test and measurement equipment marketplace benefits from both developments.

Most any engineer is likely to have Internet access at their fingertips, so finding an online sales channel is as easy and efficient as a Web search or dialing up the marketplace's Web addresses. Once there the engineer will likely discover a service quite different from ordinary sales channels.

Take brand allegiance, for instance. On the Web, marketplaces are often less entangled with long-standing, exclusive distribution agreements. As such, the online marketplace can offer equipment from a multitude of manufacturers and suppliers without allegiance to any single vendor — creating a neutral playing field on which the customer can compare products.

This brand neutrality and the ability to dispense large quantities of data easily enables an online marketplace to offer the customer “normalized” data, that is comparative performance parameters presented without preference for an instrument's respective strengths. Normalized data also allows a customer to compare equipment based on the performance parameters most relevant to a project without having to wade through performance boasts that have no bearing on their work.

3 ONLINE DATA IS CENTRAL, INTERACTIVE

One of the essential conveniences of the Web — the centralization of vast amounts of data — pays big dividends for the online test and measurement customer. Today the online marketplace can link pages rich with performance data to an active database that tells a customer if a product is available. Customers can even configure complex equipment with numerous options. All of this information can be gathered in a few clicks instead of undertaking catalog searches or calling distributors who may have limited stock or are unable to determine availability or configurations in a timely manner.

An online marketplace compresses time and cost, helping to move test equipment more quickly from manufacturer to engineer.

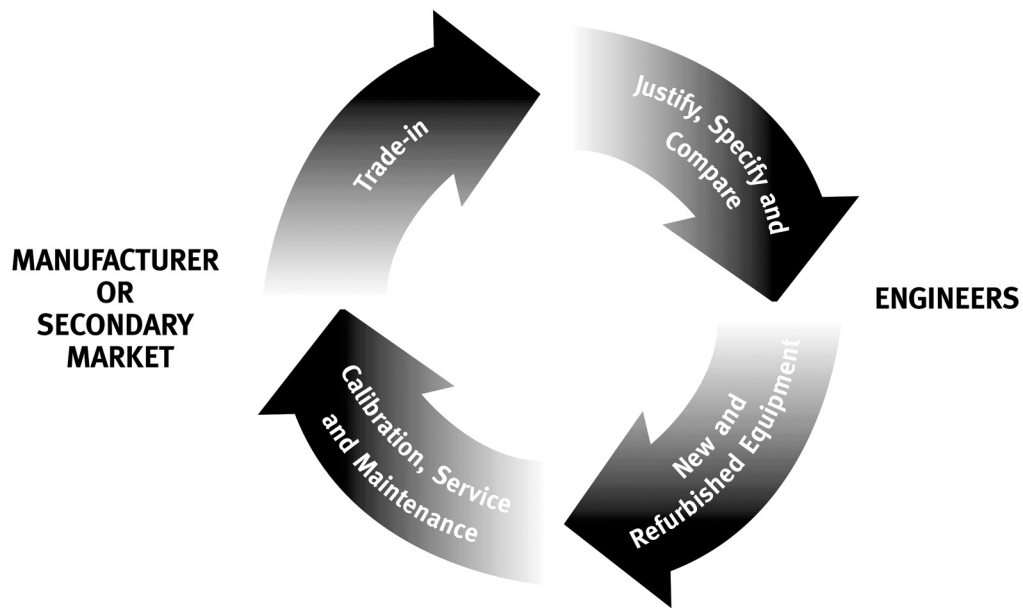


Figure 1. Online Marketplace

Centralization of data and brand neutrality also means equal billing for smaller suppliers and manufacturers who are otherwise unable to market instruments as widely as larger competitors. The increased exposure — based to a significant extent on known technical specifications — gives engineers a more competitive marketplace that negates marketing hyperbole and provides a showcase for equipment they may never have had an opportunity to evaluate.

Yet another essential benefit of Internet commerce — the potential for secure one stop shopping, order processing, and fulfillment extends the benefits of the online test and measurement marketplace further still. That's because the same powerful infrastructure that enables product availability and spec comparisons in a few clicks, also gives the customer power to purchase an instrument using the same simple steps. The customer can rest assured that the transaction is secure, and even after the order is processed, the customer can monitor its progress through order tracking capabilities that are initiated the moment the order is placed.

The centralization of commerce functions through networked databases also speeds order processing, initiating the order fulfillment and shipping process the instant a transaction is approved. Given the tight deadlines present anywhere in industries such as telecommunications and electronics where test and measurement is a priority, the days and even weeks such functionality saves the customer can be invaluable.

4 OBSTACLES TO OVERCOME

The Internet wizardry that makes the online test and measurement marketplace so efficient has limitations. In fact, for all the promise the Internet holds for streamlining the instrument procurement process, the best solution lies in a synthesis of Internet and traditional business services.

Most important for the engineers that ultimately handle complex test and measurement instruments, technical support must be as immediately accessible as the instruments themselves. To that end, some online marketplaces now complement online sales and technical resources with telephone-based and field technical support, enabling them to be responsive to customer needs and preferences.

Even in the research and transaction process, which is generally the strength of an e-business, online sales channels are wise to complement their databases of information and sales infrastructure with a knowledgeable, readily available staff that can assist a customer.

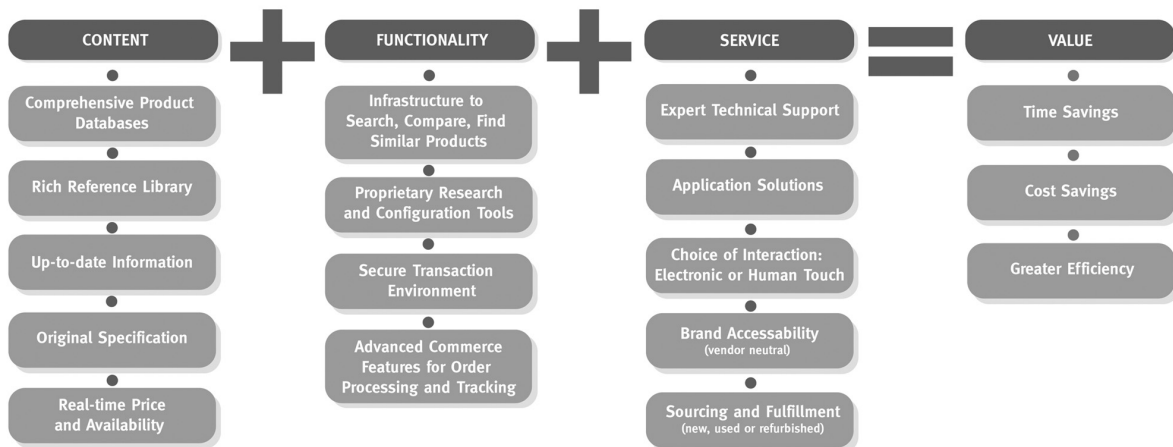


Figure 2. Value Proposition of Online Marketplace for Test and Measurement Acquisition

5 A BRIGHT FUTURE FOR ENGINEERS AND INTERNET DISTRIBUTION

Online commerce possesses the potential for a real convenience breakthrough for the engineer. An effective online marketplace gives the engineer an instrument procurement tool that's fluid, faster, more convenient, and as secure as any traditional purchasing method. They can provide a centralized, powerful research tool that yields a wealth of relevant technical specification and objective product comparisons from a full range of manufacturers.

But to survive, succeed, and rise above the scores of ill-fated e-businesses that failed to provide real service or value, online test and measurement marketplaces will have to maintain a powerful, reliable e-commerce infrastructure, complemented by service from real technical experts at every stage of the purchasing process.

Given the performance of online test and measurement marketplaces thus far, there's good reason to believe that they will live up to this potential. The benefits to the engineering community could very well be enormous.