This may help transform the increasingly everyday environment of built-in computing into a two-way system for meeting both vendor and customer needs faster, more accurately and more effectively. Since this technology is scaleable, it doesn't matter whether the focus is:

One vendor's product in one customer's hands,

All of that vendor's products in use in one country,

The marketplace for those types of products in that country, or

Multiple markets around the world.

Since this through-the-product communications may be used to transform customer-vendor relationships, results may include:

Products that can learn from and work with individuals or groups in new ways, or

Markets that employ these new built-in communications/information systems to provide new benefits such as additional market efficiencies, built-in marketwide user performance support systems, or accelerated economic growth for individual vendors or national economies.

Everyone talks back to products, but not with words they can repeat in public. Think how customers would guide products and services toward what they want if they could really talk back while they use a product, both when they have a problem and when they have an unmet need. Vendors might find an alive marketplace that helps them improve products, services and business relationships.

A number of service industries, such as market research and product testing, seek to help vendors understand their customers. This invention may enable vendors to learn directly from their customers on an ongoing basis and establish a private two-way product development relationship with them, providing a valuable addition to some current methodologies. This invention may also produce more accurate information than these measurement services because it works with larger numbers of customers, in many more markets and market niches, to learn their needs, expectations and desires during the actual everyday use of products and services.

How does this invention accomplish this? Today, microprocessors are often embedded into products as controllers. For example, many new cars have a dozen or more microprocessors inside of them. This invention uses technology to embed a customer-vendor-distributor NETWORKING MODULE into vendor-selected products and services. This technology-based Module turns the product's interface into a two-way learning device, connected to a larger learning system and architecture, so that rapid and iterative customer-based progress may become a feature of those products, services and markets. Because learning, measurement and performance improvement are interconnected, this new feature may involve customers (as individuals, in groups and marketwide) in the product evaluation and design process, and in planning business services so that they serve customer needs better than competitors can accomplish. These are strategic advantages for companies, societies and economic systems.

For products (and information systems) that contain this Module, customers may continuously inform vendors (or developers) of their current and emerging needs. The vendors of those products may have the best opportunity to respond swiftly to a much clearer view of customer problems, product problems and market opportunities than they have today. The inventor believes that within a generation it will be normal for many products and services to include this type of Module, so that customers (in aggregate, the market) comes to play a larger role in directing and controlling the commercial development of many products and services.

The closest known prior art is a combination of six areas. When combined, these six areas represent the prior art for this invention:

1 Market Research

Product and service vendors invest considerable money, employee time and corporate credibility to create their products and services. Are they as successful as they want to be? The market research industry has sprung up to answer a host of questions about customers. It is obvious that in spite of these market research efforts, customer needs that remain unknown and unfilled provide constant opportunities for creating and launching new products and services. In addition, many customers use products and services in ways that are not anticipated or fully understood by market researchers.

Why doesn't market research provide greater understanding? In market research, a variety of methodologies are used to segment groups of customers and to show the preferences and desires of the market segments. Typically, market research focuses on gathering either quantitative data (such as demographic information or numerical responses to surveys and questionnaires) or qualitative data (such as from focus groups). One of the main limitations of these research studies is that they are usually separate from the customers' actual and everyday use of the products and services being investigated.

2 On-line Surveys

In an on-line survey, a subject sits in front of a computer. Generally, this means bringing the subject to the computer that is running the survey software. At the time the subject has been told to complete the on-line survey, the survey software is run and it asks the subject questions. The subject uses a keyboard or mouse to answer the questions. The software records the subject's answers in a data file. After that subject has completed the survey, the software can report those answers. After all the subjects have been run, software can report various compilations of the data set, and provide various analyses of an individual subject, a sub-set of subjects, the entire group, or comparisons between various sub-groups. Over time, a series of on-line surveys can be compiled, and the data may be compared in various ways (such as longitudinally).

3 Field Programmable Logic Devices

Engineers now able to rapidly produce unique, custom programmed chips in their offices using "desktop silicon foundries." An engineer uses a personal computer or workstation to design the chip with commercially available software. A blank chip, in a special box attached to the desktop computer, is programmed in a few minutes. This is by far the fastest and cheapest way to create custom chips that add custom features to products. When a chip design is finished, if only a small number are needed, copies can be made in that "desktop silicon foundry." If many of these custom chips are needed, they can be mass produced in a factory.

4 Hand-held Bar Code Readers

These devices are carried into the field by many types of employees, such as couriers for organizations like Federal Express. These devices gather data from individual products or transactions by means of reading printed bar codes. This data is held in the bar code reader until it is connected to a computer or to a device that communicates with a computer. At that time, function keys are pressed and the bar code reader's data is uploaded to the computer. During that same