

The CyberGnome A Revolution in Learning

The Next Evolution of Business—Mechanized Learning

UNISYS



A Scientific Breakthrough

The CyberGnome is an advanced technology that automatically creates and maintains knowledge by interacting with people and/or information systems. Not a neural net or an expert system, the CyberGnome, embedded within a real-world application, gains knowledge and continues to learn about its environment as it operates autonomously.

This technology complements and extends the functionality of current business applications and tools. Embedding the CyberGnome within computer applications dramatically improves the efficiency of even the most intelligent solutions available today.

Why Use the CyberGnome?

Unlike other artificial intelligence technologies, the CyberGnome is able to learn without a knowledge engineer programming rules for all possible business occurrences.

Once embedded in an application, the CyberGnome does not need to be modified by human programmers. Its internal logic is fixed, yet fluid—giving it the ability to learn on its own without the support of a staff of knowledge engineers or programmers. When you look deeper, the CyberGnome offers other unique opportunities:

- The CyberGnome enables you to significantly extend your existing solutions well beyond their current functionality, which enables you to grow market share more efficiently.
- It will support the development of new CyberGnome enabled solutions enabling you to enter new application spaces and market niches.
- Because you don't have to program the CyberGnome, it saves you money on the time and cost of development and maintenance while delivering superior application capability.

All of these combine to reduce time to market and provide you with a vastly superior advantage over your competition.

Superior Knowledge

The CyberGnome is an autonomous learning machine that continues to learn and refine its knowledge by gaining experience through application use or additional training. As it's used, it continues to adapt and improve—yielding superior knowledge.

The CyberGnome can potentially obtain new information in three ways:

- By continuing to observe the process
- By getting feedback from a human knowledge worker
- By additional training

As the CyberGnome obtains new information, it modifies its existing knowledge and, over time, continues to learn and become more intelligent. It can then react in new ways based on this new knowledge—all without programmer or knowledge engineer intervention.

Mechanized Learning

The CyberGnome technology is based on original computer research conducted in the 1950s and 1960s on automated language translation. A small group of scientists, mathematicians, and philosophers continued this work by developing a set of theories on human/machine learning, culminating in the 1990s with a partnership with Unisys Corporation to commercialize this revolutionary technology.

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Benefits of the CyberGnome

- Dramatically decreases development and maintenance costs
- Automatically adapts to changing conditions and information
- Continuously creates better, more accurate knowledge
- Extends the practical boundary of traditional applications

Decrease Costs

All companies are concerned about the ever-increasing cost of doing business. An ISV is no different. The cost associated with software application development and maintenance is high. And, additional solutions are a major cost consideration—with the additional risk of not getting back a return on investment.

Embedding the CyberGnome in an existing or new solution can provide major cost benefits in development expenses. No programming or knowledge engineering is required regardless of its use in a solution. The CyberGnome learns what it's shown and manages the knowledge it gains. This causes a substantial increase in solution capability without all of the associated costs.

Creates Better Knowledge

The CyberGnome's ability to create practical knowledge from disparate bits of data and information is in itself, a triumph of science. But, as the CyberGnome is provided with new information and feedback, it continues to learn and create better, more accurate knowledge—not only does it get smarter, it gets more accurate.

Adapts to Change

The CyberGnome mirrors the way the human brain interprets information and learns—in other words, by experiencing reality it gains knowledge about the world.

A mark of an intelligent person is his ability to adapt to changes in his environment. And, like a human, if something changes in the CyberGnome's environment or if it's presented with new or conflicting information, the CyberGnome will continue to learn, become more intelligent, and expand its knowledge.

This amazing feature of adaptability enables the CyberGnome to react quickly to changes in its environment—without the help of programmers or knowledge experts.

Extends Applications

Trying to enter new application spaces and market niches is always a challenge. Plus, the cost may be prohibitive. However, CyberGnome-based solutions enable vendors to enter new spaces with more solution capability than their competitors with considerably less development and implementation costs.

Our Approach

We plan to introduce the CyberGnome to very aggressive independent software vendors who are willing to partner with us as we assist them develop applications for their markets.

Our proposition is to prove this technology within your application space. Together we will select an area within your application to solve or improve. Under controlled conditions we will work with you to prototype this solution so that we can demonstrate the value and benefits of the CyberGnome. Following that, we propose a partnership between Unisys and your company for our mutual benefit.

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