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# THE SNIPPET ENGINE

*A REVOLUTIONARY NEW PROGRAMMING TOOL*

**The Snippet Engine is a tool that allows programmers the ability to construct software in a totally new way while giving developers unprecedented power and control over traditional databases and coding languages.**

**The Snippet Engine is a unique technology, which has no similarity, nor any competition. The business opportunities for using the Snippet Engine technology for both database servers and applications are infinite with enormous savings in costs in development and unparalleled potential for earning revenue.**

Each Snippet Engine software-construct can instantaneously communicate to any other software-construct anywhere in the world, share data, accumulate intelligence, command others, manage sub-tasks, both independently and collectively. No other software technology enables the programmer to elevate their object-oriented constructs into even higher level constructs, each capable of worldwide, cooperative, self-aware execution.

This new technology innovation is realized because it enables programmers to create external interfaces which run at the lowest level of a computer's CPU, the CPU-thread. When the communications interface between databases are managed between two real-time threads, simply using a standard TCP/IP port, then any business will have their databases instantaneously synchronized, across servers spread out anywhere in the world. The Snippet Engine provides the modern technology to bring an entire ERP (Enterprise Resource Planning) server chain together, as one example, using true multi-threaded, multi-processor friendly code. This ability makes the Snippet Engine extremely fast and efficient.

***The Snippet Engine is the superior solution, because it is a totally new and innovative technology that simply does things differently. Today's databases and software applications are still based on technology derived in the 1980s and 90s. The Snippet Engine is a new innovation, based on modern computers having multi-core operating systems.***

## WHAT'S A SNIPPET?

A “snippet” is a small piece of a larger thing. The Snippet Engine is an innovative software technology that divides any kind of software application into many independently scheduled and executed smaller pieces. The whole application is accomplished as each of its many smaller pieces perform their individual assignments.

## AN ILLUSTRATIVE ANALOGY

Think of the Snippet Engine as normal code, that acts like a software-wrapper around normal CPU-core-threads. The CPU-thread is the lowest level code-entity that is executed by a computer. It is the digital “stream” of 1’s and 0’s that make a computer execute what it is told to do. These CPU-threads are the small pieces of the larger coded application. They are small parts to a larger system all working together for a designed purpose.

*This is very similar to how things work inside the human body.*

Simplified for discussion, our bodies are made up of basic building blocks called cells. Each cell in our body is made up of several key components that have a specific function like the nucleus which holds our DNA or the mitochondria which generates energy for the cell. There are different kinds of cells like skin cells and bone cells that work with other similar cells to form nerves, muscles and tissues and in turn larger organs like lungs, hands and the brain. Each individual cell has been programmed to do a very exact and specific task yet they all work together to make up a human being.

What makes the human body so amazing is that all these individual cells know what to do without us having to “re-compile” our body every time we get a paper cut or have a little too much food for dinner. If a person gets shot in the arm, the cells automatically jump into action all working together to try to heal the arm. The cells are self-aware of themselves and other cells around them and work intelligently to accomplish their missions. Our body is the greatest “computer system” ever made.

With traditional programming methods, a simple “paper-cut” bug can crash entire systems because the programmers didn’t account for the change in skin integrity or program it to handle a paper cut, instead, only shaving cuts. With the Snippet Engine each CPU-thread can now perform like a self-aware “cell”, that works in harmony with other “cells” but has a very specific role and job. Each of these cells can be working together independently and as part of the greater system. At a “cellular-level” the Snippet Engine was designed to be a superior way of programming databases and applications.

## THE INNOVATION

The Snippet Engine technology enables programmers to use standard TCP/IP connections to communicate instantaneously with any kind of software running anywhere in the world. More, this communication is between software executing at the lowest level of the CPU’s core. This means that there is no overhead between elements of diverse databases. Updates between databases are direct, immediate, and simple. Businesses can now instantaneously share accumulated intelligence from “self-aware” objects working in perfect harmony.

Any two databases can now be kept synchronized in real time by simply placing some Snippet Engine software-constructs on each server. And for applications where the Snippet Engine is used as the entire database, and its server, these capabilities mean that the business Network created will cost less, be much simpler, astronomically faster, providing 24/7 redundant and fail safe reliability, with infinite scalability.

## THE TECHNICAL EXPLANATION

The Snippet Engine is like a software-wrapper to allow each CPU-thread, small piece, to independently execute as if it were itself a high level software application. The Snippet Engine wrapper elevates a CPU-thread into a self-contained high level software-entity. These software-entities are a new kind of software-construct, that can be used for both programming and database design.

This means that the Snippet Engine enables the programmer to create any number of these new and innovative software-constructs. Each software-construct executes as a software-entity at the thread-level. Each software-entity can be programmed as if it were a uniquely scheduled high level EXE-application. These new software-entities execute as a CPU-thread, but each has a wrapper around it that makes it behave as if it were a high level application-task.

Each Snippet Engine software-construct has its own thread-level-code, can direct its own scheduling, has its own command queue, can use any kind of communication interface to talk to anything else, has its own data store, and can be created, saved, and deleted as required. The Snippet Engine wrapper will manage thousands of these software-constructs as independent pieces of execution.

The Snippet Engine wrapper is itself a normal application. It is simply a 'C++' program that is compiled and executed at any time. It can be used as a normal server-process, or as an icon that is double-clicked. The Snippet Engine wrapper code executes normally and controls the task of creating, opening, closing, and deleting the numerous Snippet Engine software-constructs that are doing the actual application-work.

Because Snippet Engine software-constructs are independently created, opened, closed, deleted, and executed at the lowest level of a CPU-core, each software-construct can be designed to do any desired task, large or small, just as if they were a separate application. Because each has its own data store, they can be assigned the task of managing just a single small portion of the business' entire database. For example, 500 of them are created, opened, and closed as needed to manage their individually assigned 500 rows of a single database table. Because each is scheduled and executed at the thread-level, each enjoys a guaranteed system-lock on whatever data it is managing. This system-lock eliminates huge amounts of software overhead typically found in database systems.

Because each software-construct has its own communications queue and can employ any type of interface, each can directly and instantaneously communicate with any other software entity running anywhere in the world. For example, the Snippet Engine software-construct assigned to manage only employee #1234, can instantaneously communicate its database changes to any number of external databases, and directly command and control other Snippet Engine software-constructs, running anywhere in the world. This lowest level data exchange has virtually no overhead. This kind of data exchange is not only instantaneous; it is direct, fast, and uncomplicated.

## WHAT THE SNIPPET ENGINE IS AND IS NOT

The Snippet Engine is not a language, but instead works inside of and with other languages.

It's not directly a database, but can be used to act as a database.

Each Snippet code-construct can have it's own database and in turn instantly communicate it's data to another.

It creates code objects that are autonomous, intelligent, self-aware, self-scheduling and friendly.

You don't have to program all apps using ONLY Snippets. You can build key Snippet code insertions that are built to communicate and interact with non-Snippet apps and tools.

The Snippet Engine can be used as a hosting server without all the typical overhead from traditional and even cloud computing systems.

The Snippet Engine methodology is not hard to learn. Initial training sessions had "non-programmers" learning the software tools after just 3 days of instruction.

Snippet is a new way of approaching programming and is not complicated. Just different.

This new software technology, instantaneously keeping all Servers synchronized, is perfect in robotic applications, real-time inventory systems, complex financial systems and many others.

The Snippet Engine is not expensive to license and far superior to traditional , bulky systems from Oracle and Microsoft.

Using the Snippet Engine provides a business with 24/7 internet presence with a fully duplicated and Distributed Database, with instantaneous fail-over, and infinite upward scalability, for only about 22% of the typical cost.

## ABOUT THE SNIPPET ENGINE'S CREATOR

The Snippet Engine was developed solely by Wayne L. Atchison over the last several years. He is a master level software manager, software programmer, and software design architect. He is an expert in software engineering with over almost 40 years of direct coding and project management experience. He was worked on hundreds of software projects since the early 1970's including work for Siemens Germany, Lockheed Martin, Loral and many others.

It is Wayne's lifelong dream to see his new vision for programming succeed in the market. Like most technical geniuses, Wayne is not a marketing whiz and is not inside all the "in-crowds". Wayne has partnered with Insyntrix to get the Snippet Engine out into the marketplace. It is an exciting early opportunity for those that understand the big picture of this technology.

Insyntrix has developed two websites using the Snippet Engine with fantastic results with more projects lining up. Insyntrix is looking for new business partnerships, licensing opportunities and special projects that will involve the Snippet Engine for your next project.