ExQori△

The Cognitive Cloud

ExQor Technologies, Inc.

Boston MA USA

About ExQor

ExQor Technologies, Inc. is a multi-disciplinary company, founded in February 2004 in Boston MA, USA.

ExQor is the only company that has fully embraced the National Science Foundation's principles of "Converging Technologies for Improving Human Performance" by synergistically unifying the multidisciplinary field known as *NBIC*.

ExQor has developed an integrative product approach that unifies **N**anotechnology, **B**iotechnology (via nano-medicine), **I**T (via the Web, Internet, mobile communications), and **C**ognitive science (via cognitive pipelines & clouds).

ExQor has developed a unique new model of human cognition based on the brain's dynamic biological and developmental processes, from infancy to adulthood. It is not AI, nor a neural net. It is something totally new in cognitive science.

ExQor's breakthrough in cognitive science also led to a major biomedical innovation in understanding the central nervous system and how to treat its diseases and disorders.

In one business role, ExQor is developing innovative new large molecule drugs for treating CNS cancer, and also for enhancing CNS neuroprotection and neuroregeneration for treating neurodegenerative diseases, stroke, and traumatic brain injury.

Some of the biomedical research is being done under non-exclusive license at Harvard Medical School (McLean Hospital), and funded by the NIH, NIDA, NARSAD, private foundations, and other funding sources.

ExQor's bio-nanotechnology is broadly protected under multiple issued patents, with additional patents pending in the US and elsewhere in the world.

About ExQor

Franco Vitaliano, President and CEO and ExQor co-founder and co-patents holder, was formerly President & CEO of VXM Technologies, a Boston-based firm that specialized in advanced bio-nanomaterials and novel, network parallel and massively parallel computer architectures for extremely high performance systems.

These systems were based on his more than two decades of work in developing advanced models of human neuro-biosystems and modeling proteins in the brain. VXM's clients included General Motors, Ford, Chrysler, GTE, the U.S. Air Force, the U.S. Navy, MITRE, the NSA, General Dynamics, Sandia National Labs, Argonne National Labs, and the DOT, among other major clients.

At ExQor he conceived and developed the company's unique and extensive bio-nanotechnologies and also formulated its global business strategy.

He also has extensive expertise in formulating global IP/patent strategies, and was primarily responsible for the conceptualization, technical drafting, and successful defense and approval for all of ExQor's patents.

He has served as an expert in bio-nanotechnology at the President's Innovation and Technology Advisory Committee (The White House), and on DOD conferences.

Gordana Vitaliano, M.D., Vice President and ExQor co-founder and co-patents holder, was formerly the Director of the Nanomedicine Lab for Neuroscience at Caritas St. Elizabeth's Medical Center in Boston MA.

She is an NIH grant recipient and sits on NIH review panels for bio-behavioral science. She emigrated from Serbia to the U.S. in 1991 (where she received her medical degree at Belgrade University) when she won a highly prestigious NIH Fogarty Fellowship.

She is currently employed at McLean Hospital (Harvard Medical School) in Belmont MA, where she is designing bio-nanotechnology with the potential to become a powerful tool in medicine, and in the future may lead to the development of diagnostic tools, targeted delivery systems and cellular repair platforms for the CNS.

This nanotechnology research work, for which she has received 3rd party grant support after extensive scientific panel review, involves utilizing ExQor's patented bio-nanotechnology for advanced CNS applications in medical imaging and drug delivery. The work is being done under a non-exclusive license from ExQor.

She has served as an expert in bio-nanotechnology at the President's Innovation and Technology Advisory Committee (The White House), on NIH review panels and on NIDA and DOD conferences.

*ExQori*Δ Transforms The Cloud

> ➢ ExQoriΔ is a new, unique kind of software entity.
>
> ➢ ExQoriΔ transforms conventional clouds.
>> ✧ *It is a Cognitive Cloud*
>
> ➢ Strongly personalized, highly dynamic, contextualized user experience.
>
> ➢ The ExQoriΔ Cognitive Cloud *knows you*, is always there for you.
>> ✧ *Quantum leap beyond iPhone's Siri*
>
> ➢ Novel, Multidimensional, Secure Platform.
>
> ➢ Compelling Customer Attraction, Strong Growth and Retention.

ExQori△ Transforms The Cloud

Self-knowledge — The ExQori△ Cloud can identify its purpose and understand its internal functions.

Perception — The ExQori△ Cloud has the ability to self-recognize, interpret, and understand highly complex inputs.

Reasoning — The ExQori△ Cloud is capable of making intelligent, autonomous decisions based on its own perception of the environment and carries out tasks to successful completion by using its own initiative.

Cognition — The ExQori△ Cloud's intellectual processes include all aspects of knowing, such as awareness, perception, reasoning, and judgment.

$\textbf{\textit{ExQori}}\triangle$ Transforms The Cloud

- Robust, Secure, Deep Platform Architecture.

- ExQori$\triangle$ transforms heterogeneous, multipoint services, data, content, and devices into a globally unified, self-aware, *cognitive* cloud.

- Cognitively correlates global user requests, experiences, relationships, requirements.

- Injects its own "insight" into end user activities, contextualizes user experiences.

- Highly dynamic, customizable and personalized user experience.

- Transforms people's relationships with the Web, Internet, and each other.

- Allows users to cognitively search, share, and correlate data, content, life experiences on a global scale.

ExQori△ Transforms The Cloud

- ExQori△ cognitively uses and examines information from all available global data.

- ExQori△ automatically formulates complex queries and actions.

- Intelligently real time iterates across heterogeneous data elements and sources.

- Alters its internal operations based on its "outside" observations or interpretations, categorizing new data based on prior results.

- It deciphers incomplete or inaccurate data by considering it in conjunction with related information and judgment,
  - ➤ *A human cognitive function replicated in ExQori△'s algorithms.*

The Engine That Powers The ExQori△ Cloud:

ExQor's Cognitive Internet Pipeline

- ❖ Intelligently, autonomously does the work.

- ❖ Puts results into highly individualized user context.

- ❖ Automatically stays abreast, intelligently examines continually changing data and user requirements.

ExQor Cognitive Pipeline Engine

❖ Employs and integrates multiple types of discovery strategies.

❖ Performs highly complex, integrative, iterative searches across disparate data.

❖ Continually refines its operations.

❖ Delivers highly individualized, pertinent, real time results based on its growing self-knowledge, perception, reasoning and cognitive faculties.
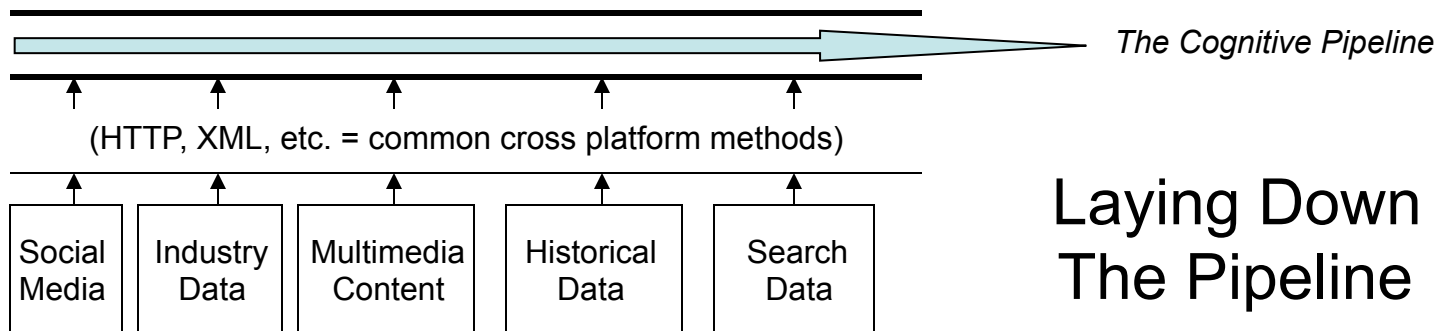
ExQor's Cognitive Pipeline Engine

- A new type of software platform for the Internet, Web, mobile telecommunications, social media, & more.

- Uses Internet and Web standards to globally integrate data, systems, social media, and devices.

- Non-disruptive overlay to existing data.

- Allows cognitive exchange of information between data types without requiring them to be translated into same format.

- High throughput.

- Very proactive.

- Highly interactive, cognitive correlation of real time events, data, social interactions.

- Cognitively puts all available elements into global or highly individualized context.

- Enables highly personalized, contextualized, secure services.

ExQor's Cognitive Pipeline Architecture

- A new information processing paradigm that can handle vast quantities of heterogeneous data in real time.

- Allows seamless integration of the multitude of point applications that have sprung up and captures multi-workflows for industrial and commercial analysis, design, deployment, or highly personalized consumer use.

- Internet pipelining is a new computational approach to managing the exchange of information among various data in order to maximize both the flexibility for addressing unexpected data types and the potential for introducing creative & cognitive insight.

The Cognitive Pipeline

(HTTP, XML, etc. = common cross platform methods)

Social Media	Industry Data	Multimedia Content	Historical Data	Search Data

Laying Down The Pipeline

ExQor's Cognitive Pipeline Engine

Handles the hard questions:

What does it all mean?

How do I find out?
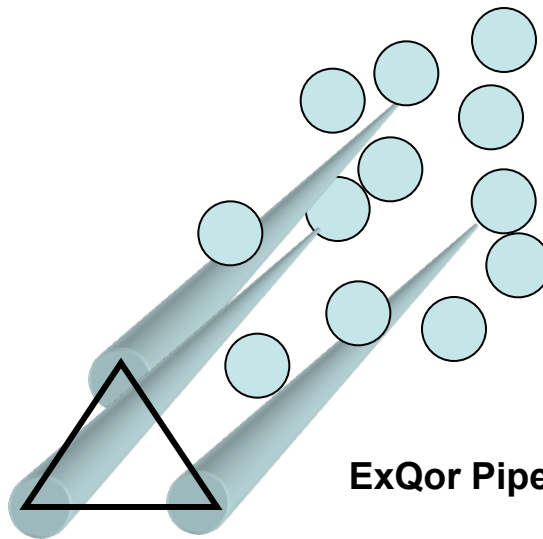
Do I have to do all the work?

Will it understand my problem?

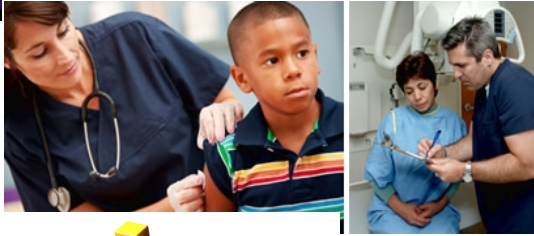*Who puts results into a meaningful context?*

How do I use the results?

Who else should I share them with?

How do I stay up to date in real time?

ExQor Pipeline Engine

*Finding & discerning
results, patterns, meaning,
putting them
into cognitive context,
staying abreast in
real time.*

ExQori△
Transforming All Into One

- Secure
- Integrated
- Analyzed
- Contextualized
- Customized
- Real Time

HealthCare.gov

ExQori△
Cognitive Cloud

Self-Aware

ExQor Cognitive Pipeline

(XML, etc., + HTTP = common cross platform methods)

Provider Data	Industry Data	Scientific Data	Financial Data	Medical Data	Patient Data	Government Data

ExQori△

The Cognitive Cloud

Only From

ExQor Technologies, Inc.
Four Longfellow Place, Suite 2105
Boston MA 02114-2818 USA

Tel 617 742 4422
Contact: Franco Vitaliano
e-mail: francov@exqor.com