Background

The Internet
Global system of interconnected computer networks that use the standard Internet Protocol Suite (TCP/IP) to serve billions of users worldwide.

The World Wide Web
A system of interlinked hypertext documents accessed via the Internet, typically by using a web browser.

Search Engines
Software platforms for searching for information on the Internet and the Web. Passive systems, require user to formulate and refine search queries, put results into meaningful context.

Social Media
Software platforms for the Internet, Web, and mobile telecommunications. Enable a global social structure made up of individuals or organizations, connected together by one or more types of interdependency, such as friendship, kinship, common interest, financial exchange, dislike, sexual relationships, or relationships of beliefs, knowledge or prestige. Passive systems, rely on their users to supply content, individual and collective context, linkages.
Internet Pipelines

- 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 exchange of information between data types without requiring them to be translated into same format.
- High throughput.
- Can be highly proactive or passive.
- Can be very intelligent, proactively assist users.
- Highly interactive correlation of real time events, data, social interactions.
- Can put all available elements into global or highly individualized context.
- Can enable highly personalized services.
Current Issues

• Data integration requirements in today’s large scale, multi-departmental, globally distributed environments present highly complex data management challenges.

• A wealth of data, including historical data, lab data, sensor data, analytical data, field data, third party data, social media, and other data are continuously being generated, collected, and in some cases, simulated.

• High-throughput technologies have created an information processing crisis by generating vast amounts of disparate data that must be processed and analyzed.

• Only with intelligent, highly automated information processing technologies and tools will naïve users, researchers, and expert users be able to identify and qualify high value data targets, and develop products and business strategies to respond to these lucrative targets, at the accelerated pace now required.

• *Internet Pipelines are the solution to the problem.*
An Internet pipeline is a new information processing paradigm that can handle vast quantities of heterogeneous data in real time, that allows seamless integration of the multitude of point applications that have sprung up and captures multi-workflows for analysis, design, deployment, and compliance reasons.

Internet pipelining is a 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 insight.

Building A Pipeline
ExQori△,  
A Cognitive Internet Pipeline

A new kind of Internet pipeline:

– It is a Cognitive Pipeline system.
– It intelligently does the work for you.
– Puts its results into highly individualized user context
– Automatically stays abreast, intelligently examines continually changing data and user requirements.
ExQori® Cognitive Pipeline

Automatically answers 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 stay up to date in real time?

Finding & discerning results, meaning, putting them into proper context, staying abreast in real time.
Key Characteristics

- **ExQori** Cognitive Pipelines:
  - Employ and integrate multiple types of discovery strategies;
  - Perform highly complex, integrative, iterative searches across disparate data;
  - Continually refine their operations; and,
  - Deliver highly individualized, pertinent, real time results based on their growing self-knowledge, perception, reasoning and cognitive faculties.
ExQori\(\Delta\) Cognitively Transforms The Pipeline

**ExQori\(\Delta\) Cognitive Pipeline**

- **Self-knowledge** — Can identify its purpose and understand its internal functions.

- **Perception** — Has the ability to self-recognize, interpret, and understand highly complex inputs.

- **Reasoning** — 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** — Its intellectual processes includes all aspects of knowing, such as awareness, perception, reasoning, and judgment
ExQori® Transforms The Pipeline

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

- Alters its internal operations based on its "outside" observations or interpretations, categorizing new data based on prior results, and deciphering incomplete or inaccurate data by considering it in conjunction with related information and judgment, a human cognitive function replicated in ExQori®’s algorithms.

- ExQori® automatically formulates complex queries and actions.

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

- ExQori®’s cognitive algorithm is a data pipelining technique because it allows the exchange of information between data types without requiring them to be translated into the same format.

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