A New Business Technology Paradigm

"Paradigm Shift" - A change from one way of thinking to another; it's a revolution, a transformation, a sort of metamorphosis. It just does not happen, but rather agents of change drive it .Thomas S Kuhn

Introduction

For over fifteen years, Procession has developed and pioneered a completely new approach to the creation of business application software. In 2008, Microsoft's Bill Gates described the essence of our revolutionary approach as the *"holy grail of software"* confirming that using a "declarative basis" in software creation, future applications should use only around 10% of the code that is used today".

Procession's approach embodies precisely those attributes, with (*inter alia)* consequent and very significant reductions in both the time and cost of providing applications and solutions for business.

Procession realises that in order to distribute its new technology, globally and efficiently, it requires building an ecosystem both locally and internationally.

Although with small beginnings, Procession realises that the new paradigm it has created can challenge the dominant players in the market:

1. Procession, described by many as a "disruptive" technology, fundamentally challenges both Oracle and IBM and their respective tools sets for application creation.
2. Procession has very strong and established prior art, including in US, and in 2008 it successfully challenged Microsoft's attempts to patent the key aspects of this new approach.
3. Procession focuses on the tasks performed by people at work, and is scalable and suitable for any size of business.
4. Procession can be deployed rapidly by business analysts and application developers, rather than conventional "hard code" programmers.
5. Procession's new capability means that to build new solutions with inbuilt agility will often be more cost effective than to change "hard coded" legacy applications.
6. More intelligent buyers are looking for both flexibility and the use of open source where appropriate. Procession excels under scrutiny on both counts
7. New operating models become possible; e.g. SaaS with the option to "buy" the application, and not just simply getting back the data; and also "agility in the cloud".
8. This is just the start of a new "journey" in Business Software – there will be more to come including the pre installation of Procession on hardware.

Background

Generally speaking, business software comes from very few players and the rationalised market is dominated by the three largest, namely IBM, Oracle and Microsoft (an interesting dichotomy; a mature industry yet an immature product set!). Yet this particular aspect of "IT" remains highly complex and continues to evolve on the basis of "components" which require to be "coded"

together to deliver a useable solution for business. The result was eloquently described in a recent article where the title says it all "IT Today: Unsustainable, unhealthy and just plain screwed".

Sadly there is little incentive to bring about a technology step change to remove complexity but this it is what drove Procession's founders to find a solution over 15 years ago. Perhaps the greatest barrier to a "paradigm shift" is the reality of "paradigm paralysis": the inability or refusal to see beyond the current models of thinking. Procession has encountered more than its share of intransigence in its attempts to be recognised in a world dominated by such paralysis.

Perhaps it takes a dramatic event to allow such evolution to get its chance to penetrate the market; the global financial meltdown and its longer term consequences have opened the window of opportunity for Procession. This view is shared by Forrester CEO George Colony; in an exchange with him he said: *"If we don't get from IT to BT [Business Technology] we're going to have more disasters like our present mortgage meltdown. Why? Because IT creates impenetrable systems that human beings can't manage. BT is about human beings back in control."*

What is Procession?

In summary:

1. Procession is a "platform technology" for the creation of business applications, including an integrated user interface.
2. Procession is a unified tool set that addresses all the requirements of business logic, which have been isolated from the delivery mechanisms.
3. Procession's "ProcessHub™" uses existing legacy systems, thus maintaining the value of investment to date.
4. Procession is the new alternative to COTS and custom coded solutions; Procession's core code does not need to change.
5. Procession's design philosophy allows for rapid change – it is truly flexible, "agile" software thus making investment in new systems future proof. Procession is the perfect tool for use with the IT industry's "agile methodology" initiative.
6. Procession delivers high levels of process automation and operational efficiency.
7. Procession uses a "declarative technique" – just as envisioned by Bill Gates; there is no code generation or compiling of code to build applications.
8. Procession applications can be built very quickly: *circa* 80% less time than conventional "hard coded" applications.
9. Procession closes the "interpretation gap" between the business users and the application developers; application development now becomes a "domestic matter", managed by business professionals. There is no requirement for armies of hard code programmers.

In 2009 Eoin Meehan MSc, a senior researcher at Trinity College, Dublin, researched Procession's capabilities on behalf of some Irish interest, which is now gaining momentum. With his permission, these observations may help:

1. The Procession engine creates a unique "instance" of the process for each user when that user invokes the process. The user does not have to be concerned about other users or "driving" his process. This removes a huge amount of "procedural responsibility" from the process designer.
2. The second important aspect of the design is that it is *data-driven*, not *procedure-driven*. This means that there is no compiling, no exporting, no translating of the process; the Engine *inherently understands* what a process is; tasks, flows, decisions and delivery of the working form to the right person at the right time – you simply give it the unique properties of your tasks, flows and the integrated user forms.
3. When you draw the process, it's ready to run. What you build as the prototype is actually Version 1! *Nothing is thrown away;* no dummy screens, no hard-coded demos. Build it, show it, change it then deploy it!
4. Processes cross functional boundaries, so this capability gives the Procession Engine the ability to become a hub, co-ordinating and orchestrating complex processes. It allows the legacy, silo or functional systems *to continue to do what they do excellently*, while integrating them into the corporate-wide process flow. This maximises and extends the life of the original investments.
5. Procession have web-enabled the Engine by developing an extensive and well-documented "tag library". This is a technology which allows a web-server to interact with the Procession Engine without *having to know anything about the web technology*. This means the Engine has not been "interfered" with in any way and remains pure to its design philosophy.
6. *At its conception 15 years ago, the Procession Engine was state-of-the-art; today it remains state-of-the-art!*

Summary

Procession has developed and pioneered a completely new approach to the creation of business application software. It is a paradigm shift, prospectively of seismic proportions for the world of business application creation. Procession's technology is robust, proven and operational.

The technology priorities of commerce, industry and government are set to change radically, with a far greater emphasis on value for money and "future proof" of investments; these changes will provide Procession with many opportunities for significant growth.

Procession's market is the world market, and as such Procession is seeking links with UK and International organisations who have no conflicting technology, and who also seek to exploit the paradigm shift created and delivered by Procession.

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Appendix

A Brief Overview of Procession's Technology

1. The essential design philosophy is as follows: people perform tasks and create all source information; tasks (both human and system) are linked together in process to enable people in an organisation to achieve their individual and collective outcomes. These task types, including the user interface, are identified and expressed as data within an RDBMS (a feature that Microsoft tried to patent). Procession chose the Oracle Database following earlier R&D using Paradox and dos operating system.
2. The development tools run in a MS Windows environment and include:
    - The Graphical Process Designer (GPD) is used to build the process application and its components, including setting up the data structure and building the forms.
    - The Copy and Versioning tool allows process change to be deployed without disruption and seamlessly manages the transition of active tasks from the original process across to the new process.
    - The Form converter facilitates rapid development of the user interface JSP; a form designed using the GPD can be converted into a JSP containing all of the required mark-up for the tag library.
3. The utilities facility allows the developer to query data within the database using either the Procession macro language or standard SQL.
4. The Procession Tag Library is a custom JSP tag library that can be used to easily create web pages using data from a variety of sources. It creates the binding between the form objects and the back-end databases, without the need of additional Java coding. The Procession Tag Library is a standalone runtime component that can be used with any new or existing Java web application.
5. Procession uses its Java SSXMQ to integrate with other systems. This is done via an adaptor that has been written for that system. This is then executed from the SSXMQ task in your process. If the integration cannot be performed via one of the standard adaptors then a custom adaptor can be written.
6. XML Design gateway allows for processes defined in XML to be imported into the Procession environment.
7. The XML Runtime Gateway allows external systems to import/export data in XML format over HTTP/HTTPS.
8. Support for CSV files allows external systems to import/export data in CSV format over HTTP/HTTPS.
9. Procession can be used with a variety of proprietary and open source offerings including operating systems, application servers and browsers.