

Biometric and Token Technology Application Modelling Language (BANTAM)

a report by

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Julian Ashbourn has a long association with biometrics, being one of the pioneers in implementing biometric solutions and broadening the understanding of this technology. His book, *Biometrics – Advanced Identity Verification*, has proved to be a popular and valuable reference in this context. Mr Ashbourn is also responsible for developing the User Psychology Index, Biometric and Token Technology Application Modelling Language (BANTAM) and other initiatives made freely available to both the developer community and users.

Biometrics as a technology has taken a long time to become established in practical applications and still has some way to go before gaining mass acceptance levels. One of the reasons for this has been the difficulty in translating technical theory into practical, reliable and useable applications. This difficulty was compounded by the fact that vendors, consultants, systems integrators and users seem to speak a different language, leading to misunderstanding and confusion. What was needed was a common methodology for uniting these disparate entities and providing focus on real applications. This led to the development of Biometric and Token Technology Application Modelling Language (BANTAM). BANTAM was released in June 2001 as a freely available methodology to aid the transition from the aspiration to implementation of biometric and related programs.

It consists of two main parts. A graphical symbol notation allows any aspect of either an operational process or systems function to be expressed in clear, unambiguous terms that may be understood easily by anyone in the chain of a typical program, from vendors and consultants to in-house analysts and application developers. In addition, the resulting BANTAM maps are interdependent, allowing for as many layers of detail and complexity as are required, to be cross-referenced and extrapolated easily in either direction. Each BANTAM map is augmented by a Map Explanatory Notes document that provides a plain language textual description of the process or function that is being depicted. The BANTAM maps are therefore portable across boundaries of expertise, department, organisation and country.

The second part of BANTAM is a complete documentation set, provided in the form of ready-to-use templates in both US and European page formats. The standard documentation consists of the following:

- request for information (RFI);
 - request for proposal (RFP);
 - training schedule; and
 - business case.
- In addition to the standard map set, BANTAM reaches into areas of procurement, training and business case preparation. These are important areas to cover within the context of an overall program and are entwined irrevocably with the technical specification and process engineering that is involved with any significant project. There are also distinct benefits associated with the use of these documents, from both the end-user and supplier perspectives. End-users will benefit by having a well considered standard methodology to work with that ensures that consideration is given to all of the pertinent areas and that they may articulate their requirements in a manner that will be understood easily by potential suppliers and development personnel, whether internal or external.
- Suppliers will benefit by having requirements and aspirations expressed in a standard manner, allowing an accurate response using the same methodology. In addition, it will allow for the incremental creation of a highly pertinent and detailed 'knowledge base', promoting the re-use of proven functionality and considerable increases in efficiency, because such functionality will already be described and documented fully in working levels of detail. The potential cost savings inherent in adopting such an approach are significant. The provision of a common language to use in the description and specification of biometric applications represents a major step forwards for the biometric industry. It promotes intelligent and responsible exploitation of biometric and related technology to provide enhanced functionality in the 21st century. The time that is saved by having a properly considered, well-documented and articulated requirement that may be understood readily by all concerned at point one could be considerable. There are several additional benefits, including the following:
- application logic map;
 - systems architecture map;
 - logical scenario map;
 - functional scenario map;
 - object association map;
 - miscellaneous definition map;
 - map explanatory notes;
 - the value of the BANTAM maps as working documents for on-going discussion and refinement, cutting through any ambiguity or misconceptions;

- a standard procedure for issuing and responding to RFIs and RFPs that ensures a fair and realistic evaluation of what is being proposed, as well as a common format, thereby saving time in misapprehensions or incorrect assumptions;
- a mechanism for thinking through and orchestrating the associated training and communication requirements, ensuring that this important area is given the attention it needs in good time, thereby saving considerable time further down the track, as well as removing opportunities for misunderstanding or poor quality enrolments and subsequent transactions; and
- the automatic creation of a quality program archive that may be referenced readily in the future for system maintenance or enhancement purposes, whether or not the personnel that are involved were part of the original project team.

The standard BANTAM distribution is freely available and may be downloaded from the Avanti website (<http://homepage.ntlworld.com/avanti>) and other trusted sources. It may be redistributed between end-users and suppliers as required – provided it is distributed in its entirety – enabling all of those concerned to benefit from this initiative. For

those who wish to enhance the standard distribution, a more in-depth *BANTAM User Guide* will be published by Springer in autumn 2001. The BANTAM Program Manager software utility is also available and provides for document management and multiple project information and reports, as well as integral user and supplier databases.

A recent enhancement to the BANTAM philosophy has been the provision of a *Biometric Users Charter* as an initiative to dispel misconceptions around the use of biometrics, as well as to promote intelligent discussion between user communities and organisations seeking to implement biometric solutions. The *Biometric Users Charter* provides a vehicle with which to build on this foundation and encourage honest and open dialogue between all parties concerned.

After some industry rationalisation and valuable end-user project experience, the biometrics industry is now poised for a more realistic future. Much good work that has been undertaken by government agencies and associated bodies worldwide has ensured a growing understanding of the use of this technology. BANTAM provides the missing piece of the jigsaw, allowing people to realise the benefits of this technology in a practical and consistent manner. The next five years will be interesting. ■

Small in size and cost effective FPC1030



Fingerprint Cards is developing **complete embedded systems** for fingerprint verification. This includes the design of **sensors** and **processors** technology together with **algorithm** development. The aim is to supply our customers with a fingerprint system for embedded use.

In order to make a fingerprint system **small in size** and **cost effective, yet still secure**, silicon-type sensors are

necessary. Fingerprint Cards produces an **area sensor FPC1010** and following a study completed in 2000, design is now finalised for a **swipe sensor FPC1030** to complement this. The swipe sensor covers only a small slice of the finger and is used by swiping the finger across the sensor surface. With its very small silicon area the swipe sensor alternative offers **lower cost** and **extremely low requirements on memory** in the system.