

## **RECOGNITION : EVOLUTIONARY IMPLEMENTATION**

The rapid growth in new machine-readability technologies and the consequent availability of cost-effective softwares to displace manual methods, poses change management challenges for managers with responsibilities for administrative systems.

Some 80% of the information entered into business computers is keyed manually through a keyboard. Around 10% is currently scanned and recognised. Over the next decade we can expect keyed input to drop significantly to around 50% and scanned input to rise to about 30%. At the same time the overall volume of information entered is likely to rise by 10% per annum compound. Scanning and recognising are therefore set for very strong growth, such that talk of a Recognition Revolution is not exaggerated.

Implementation of recognition systems is dependent on three main factors. Firstly, there is the credibility of the technologies and user competencies with the technologies. Secondly, there is the economic dimension of investment in new technology and the short (12-18 month) payback periods demanded for office automation projects and, thirdly, there is the social dimension of changing work processes and involving, training and motivating staff.

The credibility of the technologies and user competencies in them are really dependent on user learning processes. Recognition technologies are not ubiquitous commodities like spreadsheets. They are science-based, very different in scope and application and perform according to very strict rules. Systems for machine readability are invariably bespoke for each application and generally use more than one recognition 'engine'. As a rule of thumb, reading print from standard fonts is generally easy, reading handprinted but separated alphas and numerics is practical, reading joined-up handwriting is not yet economic and reading bar codes is one of the most accurate forms of machine recognition.

Machine readability is however much more than recognition technology. It is also about media and the control of media. Most forms need to be re-designed for optimum machine recognition, because most forms have been designed for eyeball recognition and the electronic 'eye' sees differently to the human eye. Most forms have not been designed for machine handling, to be loaded into a hopper and automatically fed through a scanner. User competencies begin with understanding what information can be recognised at what cost and

with what implications and what colour, size, weight and registration of paper is needed for optimum automatic recognition performance. Forms design as a subject needs to be re-visited for the new technologies. At a practical level staff need to familiarise themselves with scanner operations, electronic document control and new data control methods.

The economic dimensions revolve around two main issues. The first is the value of service improvement if work can be done more quickly and more accurately and the second is the financial investment and returns. Users generally look at both issues to produce tangible returns in very short timescales. Basically recognition is a displacement technology replacing manual methods and users expect to save money quickly.

Work process improvement is a much more pragmatic subject. Few would disagree that the new recognition technologies present major improvement opportunities for existing work processes. By the early years of the next century these technologies will be as commonplace in the office as scanning is today in the supermarket. But given the learning-curves and the uncertainties how do you choose an evolutionary development strategy that will deliver all the benefits stage-by-stage perhaps over a number of years enabling people and organisational infra-structure to adapt to change? The problem is how to get from keyboard capture to automatic recognition peacefully and profitably.

A useful technological solution is to choose a software system that allows one to do it at one's own speed with a product in continuous development that offers all the features, functions, mixes and matches that one could conceivably desire.

ROCC has designed and built such a software product. It is called SEECHECK and it is being installed in the UK now. SEECHECK works in both Microsoft and Unix environments. It can handle thousands of forms per day or just a few. SEECHECK is a multi-functional data capture system handling every extant commercial recognition engine, the most sophisticated key from image capture available, storage, retrieval and archiving from DASD and laser disks, addressing utilities with the UK postal address file, all within a controlled workflow environment.

This total approach to 21st Century capture enables a user to begin by keyboarding to the best standards, move on to scanning and key from images, progress to automatic data recognition removing keying operations, archive to magnetic disks and then move on to laser disks, add automatic addressing (generate an address from a postal code) in a series of

interlocking integrated softwares. Benefits are delivered at each stage. Staff are motivated and enthusiastic to deliver the improvements. The pace of change is dictated by user needs not software limitations.

Recognition may well be a revolution in science, technologies and their use in office automation. Implementation however can be evolutionary allowing those who have chosen the right strategy to achieve the benefits without the hassle.

The starting point is to assess the potential of the new recognition systems in the light of organisational needs to improve work processes.

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A piece for the DPS Newsletter