



BIOCRYPTICS SOLVING THE TICKET TOUT AND RESELLING OF CONCERT TICKETS PROBLEMS

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- **EXECUTIVE SUMMARY**

The unauthorised reselling of concert or major event tickets has become big business for several unscrupulous people. Touts purchase concert or event tickets in volume via highly organised methods and resell them at such greatly inflated prices that many real fans cannot afford to purchase them. The value of aftermarket ticket sales in the UK is currently estimated as £200 million per annum.

It is well documented that the performers and their management are not happy about this. Some feel they should be earning a revenue from the final selling price of the ticket, as opposed to receiving a revenue from just its original selling price. Some performers just want their fans to be able to buy tickets at the original selling price they set, rather than perform to a venue full of fat walleted spectators who are on a corporate jolly!

Additionally, and arguably as a result of this 'unauthorised aftermarket', counterfeit tickets are also produced and sold to people who only find out they do not have a real ticket when they are at the entry door.

Some event organisers have tried to combat this problem by requesting that the credit card used to purchase a ticket be presented at the venue's point of entry. However, this was easily overcome via copies of credit cards being provided with each of the tickets being resold.

Datatel Networks Ltd., together with GenKey Corp., have designed a Biocryptic Identity Ticket Management System that uses pre-registration of an individual's fingerprints to purchase tickets and verification of their registered fingerprints to attain venue access. The result of this is the complete eradication of ticket touts and the sales of false tickets as, without fingerprint authentication, there will be no entry to an event.

Additionally, ticket production and distribution costs, currently borne by a third party ticket agency, can be significantly reduced as the current expensive, hologrammed, full colour printed and posted tickets can be replaced with e-tickets and sold either through existing online vendors, directly to the spectators by the performers, or at pre-registration stations, located in industry related retail stores in the High Street.

- **GENKEY BIOCRYPTICS EXPLAINED**

GenKey technology is not biometrics (the storage and verification of people's fingerprints against template images). GenKey is a patented technology that converts scans of fingerprints into Crypto Keys and publishes them as Public Keys (strings of numbers) and 1D bar codes. The result is no storage of any sensitive biometric information anywhere in the system and no need for the distribution of biometric templates around the world for authentication purposes. It is only the subscriber's Public Keys and 1D bar codes which are distributed. Meaning, therefore, that the whole database can be lost without creating a privacy problem.

- **OVERCOMING THE EARLY ADOPTER PROBLEM**

Despite the fact that by using GenKey their privacy will be protected, many people are sceptical about registering their fingerprints for goods and services, will be concerned and, as a result, may decide not to attend if a pre-requisite, is having to provide their fingerprints.

To overcome this, an event organiser could make fingerprint authentication an option, as opposed to mandatory, with an incentive of a cheaper ticket price to those who pre-register and authenticate their entry via use of their fingerprints. For example, "purchase your ticket through a ticket agency at the official price of £55 or "Use the Finger" and buy e-tickets either direct from the performers or at your local high street at £45 each".

It should be noted, however, that fingerprint authentication is for many people becoming quite common-place (since 2005 finger print reader turnstiles at Disney World in Orlando have been authenticating ticket owners). Most new laptops have fingerprint readers, as do several PDAs. Many school children now authenticate themselves, everyday at school via their fingerprints, in order to register at the start of every lesson, to purchase their lunch, or take books from the school library. Several car hire companies request fingerprints. The USA border control insists upon them. UK airports customs also insist on registration of them for all non EU visitors. Lots of tomorrow's mobile phones are having fingerprint sign-on built-in to them.

- **EVENT TICKETING SOLUTION**

GenKey's patented technology takes finger print authentication from expensive and proprietary systems to simple and inexpensive PC-platforms that demand very little CPU and storage capacity. Because only strings of numbers are being stored, millions of individuals GenKeys can be stored and verified by an ordinary PDA connected to a fingerprint reader.

When a fingerprint is being verified on a reader, it is not matched to an image of a fingerprint. Instead, the system searches for a string of numbers that cross matches with the GenKey 1D barcode on the e-ticket, that has been scanned with a hand held bar code reader. The fingerprint and ticket matching process is, therefore, performed very quickly and existing door throughput rates are not effected.

This combination makes the GenKey technology optimal for managing entry rights at a concert or event.

- **FLEXIBILITY**

The event organiser can decide on the number of person entries per GenKey registrant. It can be one entry per registrant or, for example, four entries per registrant. To overcome problems associated with peoples unexpected change of plans, sold tickets can be easily transferred online between registered Genkey holders at a later date.

- **PRE-REGISTRATION STATIONS**

Industry related retail store chains, or independently owned retail outlets, will be invited to become fingerprint pre-registration stations. A direct advantage of this will be the likely increased merchandise sales within the stores.

Details of the pre-registration stations can be published on a website page for ease of location. Registrars can charge each registrant a one-off registration fee of £5 to £10 if they were only registering someone (i.e. not selling them e-tickets at the same time). Once registered, the registrants will be able to purchase tickets for all the future events that have deployed a GenKey managed entry system (i.e., fingerprint registration is a one time only procedure).

- **THE PRE-REGISTRATION PROCESS**

The pre-registration process is relatively simple. All that is required is a Microsoft Windows based PC with internet access and authorisation rights that allow the user to register their details as a pre-registration station and download a GenKey software applet. The PC will also have to be equipped with an optical fingerprint scanner connected to one of its USB ports and be able to print to a printer and send and receive emails.

The registrant will be offered a copy of the GenKey Privacy Statement (a layman's explanation of the aforementioned GenKey Algorithm process, explaining that no images of the registrant's biometrics are stored and cannot therefore be compromised). The registrant will provide his/her name and contact details and register both of his/her forefingers on the fingerprint reader. The fingerprint registrations will produce a Crypto Private Key which will be stored on our systems and produce a Public Key (the registrant's GenKey). The registrant's contact details and their GenKey will then be printed off c/w a corresponding 1D bar code. A copy of these will also be emailed to the registrant so he/she has an electronic copy of them for future reference purposes (as the GenKey will need to be quoted/submitted when purchasing a ticket).

- **TICKET PURCHASING**

If the event organiser has an existing method of ticket distribution, the registrant's details c/w corresponding GenKeys will be provided to them so cross matching can be used when processing e-ticket sales. Registrants will purchase the event ticket(s) online in the normal manner. Cross matching the name of a GenKey registrant to ensure it is the same as the credit card name is not necessary. However, if the purchaser does not have a GenKey their attempt to purchase will fail. Successful ticket purchasers will be emailed an e-ticket, comprising date, time of event etc., and a copy of their GenKey and 1D bar code. The ticket purchaser prints these off and brings them to the event, as this will be used as authenticating the registrant, along with their finger at the entry door. An alternative method of purchasing a ticket could be, as aforementioned, at the pre-registration stations (retail outlets). Indeed, an organiser of an event that has its entry rights managed by fingerprint verification and e-ticketing could very easily appoint a chain of retail stores as their exclusive ticket vendor!

- **VERIFICATION AT ATTENDANCE**

Fingerprint readers and hand held bar code readers will be located at each entry point for registrants to verify themselves. Each ticket holder will have their fingerprint scanned and the GenKey generated will be cross matched against the scan of the GenKey 1D bar code on their e-ticket. Any failed verifications will be directed to an entry point with a help desk. There a copy of their GenKey e-ticket and another form of ID and/or the credit card used to purchase the entry ticket can be authenticated.

- **DATATEL NETWORKS LTD**

Datatel Networks Ltd is a privately held company headquartered in Douglas, Isle of Man with offices in West Sussex, UK. The Company was established in 2001 and has been delivering biometric solutions to European companies for more than six years. In addition to its biometrics activities, Datatel has also been operating as an ISP (Internet Service Provider) and providing a full suite of IT, Voice and IP solutions to the SME sector via suppliers such as BT Group, Verizon, Easynet and Cable and Wireless.

- **GENKEY CORP / MELTWATER GROUP**

GenKey is a privately held company headquartered in Mountainview, CA, USA with offices in Chicago, IL, USA and Bergen, Norway. The Company was established in 2001 and has since then developed and patented its unique technology, named GenKey for providing cost effective biometric ID-card solutions based on sophisticated Biocryptic algorithms for biometric identification and verification. The Company is a part of the Meltwater Group, a worldwide player in the field of electronic media monitoring, serving a growing portfolio of the world's most successful and admired companies and organisations. Currently Meltwater has offices spanning across North America, Europe and Asia Pacific.

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