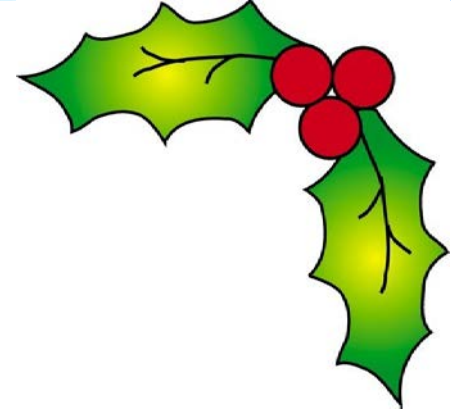


# ITSO Based Smart Tickets

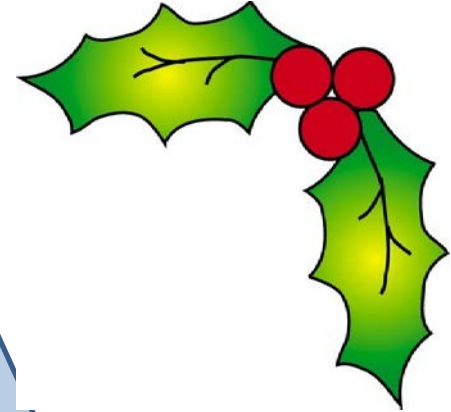


## Quick Introduction

[www.smartran.co.uk](http://www.smartran.co.uk)  
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# Cinderella in the Smart Ticketing World



**Mifare  
Ultralight  
Smart Tickets**

**ITSO CMD4**



# Background

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- Mifare Ultra-light MF0ICU1– low cost chip designed for limited use in transport and event ticketing and loyalty applications
- First introduced in 2001 hence - ITSO CMD4
- A leading supplier has shipped >300 million
- 3 ITSO test certificates for CMD4 products
- 512 bits of storage – 384bits for user data
- First ITSO use in Cheshire scheme (low volume)
- Ultralight-C MF0ICU2 launched in 2008 with improved security and user storage trebled



# The Opportunity

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Mifare Ultralight can fill a key role in a scheme:

1. Format – single, roll, fanfold, booklets
2. Single and return tickets
3. Visitor/Tourist passes (short-duration)
4. Weekly/monthly passes
5. Temp replacement of lost/forgotten pass
6. Eliminate all paper and mag stripe tickets

Also loyalty and event ticketing uses



# Challenges

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- ITSO space saving IPEs are one time use
- Business case when cost is 10-15pence each
- Design issuance method/process from Day 1
- Procurement of TVMs and dispensers
- Bypass for faulty smart tickets on TVM
- Early testing with all scheme POSTs
- Quality volume supply with assured lead-times

# Cinders will come to the Ball





# The Future

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- ITSO should add Ultralight-C and industry alternatives to media types
- ITSO should allow re-use or renewal/extension of IPE 27/28/29 or equivalent
- Limited use e-purse (cf phonecards)
- More schemes will adopt low cost smart tickets to go completely smart & meet the needs of occasional travellers

# Smartran Ltd

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- **Innovative independent smart business solutions**
- Founded in 2003 to deliver smart ticketing and resident smart scheme solutions
- ITSO smart ticketing experience from 2001
- Member of Smart Card Networking Forum from 2005
- Kevin Farquharson – Chair SCNF since 2009
  
- Smartran is the leading provider of innovative smart card scheme consultancy services and cost effective practical solutions to local government and transport service providers.



# Smartran Credentials

- Transport Ticketing – Internet, Mobile & Smart



- Resident Smart Card schemes



- Bill, Retail, Pre- & Post Payment; Settlement



- Our focus is to reduce card issue & transaction costs while improving customer service & satisfaction