

Media-Tech Conference

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Flash Memory Duplication Services

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Agenda

- Brief introduction to Cardwave Services Ltd
- The market opportunity for flash based services
- Basic requirements of a duplication company
- Brief introduction to encryption, DRM, partitioning
- Examples of specialist projects
- Value-add services
- Summary

Cardwave Services Ltd

- Formed in 2004, and a pioneer in duplication-based services for flash memory products
- Very capable, technically proficient
- Market leader in Europe - expanding into the US
- Global client base of blue-chip companies
 - Navigation, mobile, network operators, memory card manufacturers, content owners etc...
- ISO9001-2000 accredited
- Extensive contacts in the flash market with key partnerships for supply of product, manufacturing, engineering services and technology development

Building the Business Case

- Shipments of flash memory cards exceeded 720 million units in 2007
 - This generated an estimated revenue > \$8.7 billion
- Mobile phone sales topped 1.1 billion last year
 - Over 380 million of these had memory card slots
 - Market research firms forecast this to exceed 500 million by 2010
- GPS market forecast to be worth \$30 billion this year
- How big is the opportunity in music and film ?
- ... and other types of content ?



Where are you now ?

... and where do you want to be ?

The Bare Necessities

- You need specialist knowledge
 - Flash memory is a complex technology
- Infrastructure
 - Equipment – PC based, purpose built
 - Security
- Quality control & process management
 - Especially for creating masters
- A reliable supply chain
- The right people

What Can You Do With Flash ?

- Flash memory is a storage technology
- .. but with the right tools you can ...
- Encrypt files
- Create multiple partitions
- Hide partitions
- Support DRM
- Unique programming of commands
- Web enabled services

Case Studies

- Handset manufacture, MemoryStick Duo, audio book
 - 79 chapters, MP3 format
- European Government agency, USB FlashDrives
 - Unique cleansing of the drive, second serial number, programming of hidden asset tags, firmware reload, changes to ID string
- Telecoms service provider, USB FlashDrive
 - Auto-run, hidden files, self updating algorithm
- Navigation, SD card
 - Web based encryption, unique serial number

... the reality of the situation is
that these services require
specialist engineering work

... there is no off-the-shelf solution
for all answers ...

Customisation Services

- A lot of similarity with your existing business
 - Customers are the same, requirements are probably the same, but the format and application will be different
- Decoration/Printing
 - USB FlashDrives, miniSD, microSD
- Labelling
 - Full size SD, CompactFlash, MMC, RS-MMC, various adaptors
- Packaging
- Accessories
 - Beware of compatibility if supplying functional accessories – e.f. adaptors, readers

Summary

- People understand flash memory cards
- Various applications for content on cards
 - Some more developed than others
 - and the market is growing !!!!
- Your customers will need solutions and support
- Know and control your supply chain for cards/drives
- Develop the right partnerships
- Have fun !



Thank You