

Mobile Multi-level Superdistribution

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4FriendsOnly.com
Internet Technologies AG

Spin-off of Fraunhofer



Institut
Digitale
Medientechnologie

OMA DRM 2.0 is part of the platform



Outline

- ❑ **The Idea of Superdistribution**
- ❑ **Multi-level Rewarding with Superdistribution**
 - *Example case: The Potatosystem*
- ❑ **Technical solutions:**
 - *DownloadStore4you (Server Components)*
 - *The Mobile Application “BlueMatch” (File sharing for OMA DRM encrypted files via Bluetooth)*
 - *Progress of Superdistribution with DownloadStore4you*
- ❑ **Transaction Tracking**
- ❑ **Fields of Application for Rewarded Superdistribution**

The Idea of Superdistribution

- ❑ Legal dissemination of encrypted digital content (e.g. music) by anyone
- ❑ Content can be assigned usage rights, like to...
 - *...listen a song unlimited times or*
 - *...burn it on CD three times.*
- ❑ Usage rights can be enforced by means of Digital Rights Management (DRM)
 - *A proper license must be acquired to access the content*
 - *License contains a Content Encryption Key and Rights*
- ❑ Content Distribution: Only the encrypted content is passed on, the license stays on the terminal

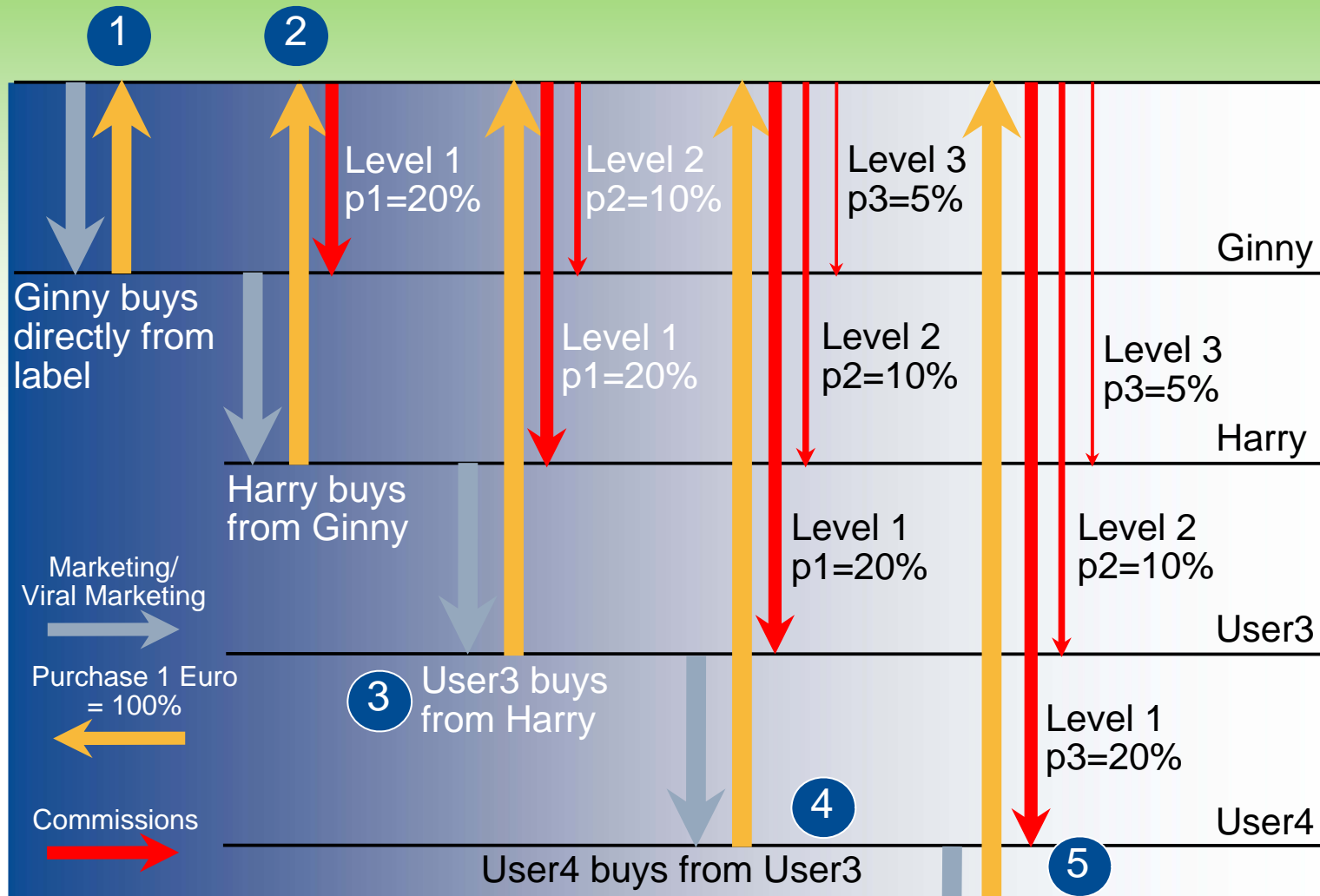
Motivation to support Superdistribution

- Viral marketing is a new option for the download business to increase revenues**
- Superdistribution technology can harness the power of user communities through viral marketing opportunities**
- Rewards can motivate users to actively re-distribute virtual goods**

Multi-Level Rewarding

- ❑ **Single-level rewarding solutions are not sufficient for viral marketing**
- ❑ **Multi-level user rewarding is a major key to viral marketing**
 - *Resellers and their buyers of content can not become competitors*
 - *Resellers are rewarded for successful re-sales of their buyers*
- ❑ **Example case: The PotatoSystem**
 - *Online music distribution platform*
 - *Joint work of 4FO AG and Fraunhofer IDMT*
 - *Buyers of music get the right to resell it on own websites*
 - *Resellers get commissions in three rewarded levels*

Multi-level Rewarding in the PotatoSystem



DownloadStore4you

- **DownloadStore4you is the new download platform of the 4FO AG**
- **DownloadStore4you was developed from the PotatoSystem**
- **DownloadStore4you provides further functionality for DRM systems like e.g. OMA DRM and Windows Media DRM**
- **Adaptation for mobile superdistribution (e.g. mobile device management and transaction tracking)**

Download Store 4you

>>LOGO
Logged in as: 4fo

Home

Creation

New Codes

Overviews

My Devices

My Downloads

My Sales

My Pay in/out

My codes

My bank transfers

Administration

My Data

Enter Codes

PayOut

Charge balance

Terms and Conditions

Company Info

My Downloads

by clicking on this symbol you can download the preview file

by clicking on this symbol you can download the file

by clicking on this symbol the preview link of the file/album will I shown

by clicking on this symbol the sell link of the file/album will be st

by clicking on this symbol you can start the IFrame-Builder

by clicking on this symbol you can send the sell link to a friend

the entry is an album

filter entries after artist account

4 **Al Board - Night Walks** AlBoard 1
Purchase date 21.05.2007

3 **Al Board - Every Single Chord (instrumental)** AlBoard 1
Purchase date 21.05.2007

2 **Al Board - Chaos (instrumental)** AlBoard 1
Purchase date 23.04.2007

1 **Al Board - Bloody Roads (instrumental)** AlBoard 1
Purchase date 23.04.2007

Technical Prerequisites for Mobile Content Distribution

- **Current mobile phones well prepared for content consumption and distribution**
 - *High storage capacities (e.g. 8 GB hard drive on Nokia N91)*
 - *Wide range of connectivity solutions*
 - *Combined DRM implementations (OMA DRM, WMDRM)*
- **Appropriate content delivery methods:**
 - *Downloads via HTTP using 2.5/3G networks*
 - *File exchange via Bluetooth and possibly WiFi*
- **Drawbacks:**
 - *Device interoperability (Infrastructures, DRM implementations)*
 - *Content support differs (Not all content formats and metadata are supported by all devices)*

Superdistribution with BlueMatch

- **BlueMatch is a mobile application to:**
 - *search and download OMA DRM protected files via Bluetooth from devices nearby*
 - *offer OMA DRM protected content for other devices running the program*
- **BlueMatch's J2ME based implementation:**
 - *based on a threaded client/server architecture*
 - *up to 7 concurrent file uploads and downloads possible*
 - *community list offers access to devices running BlueMatch (e.g. to start file download)*
 - *MIDlet can work autonomically*



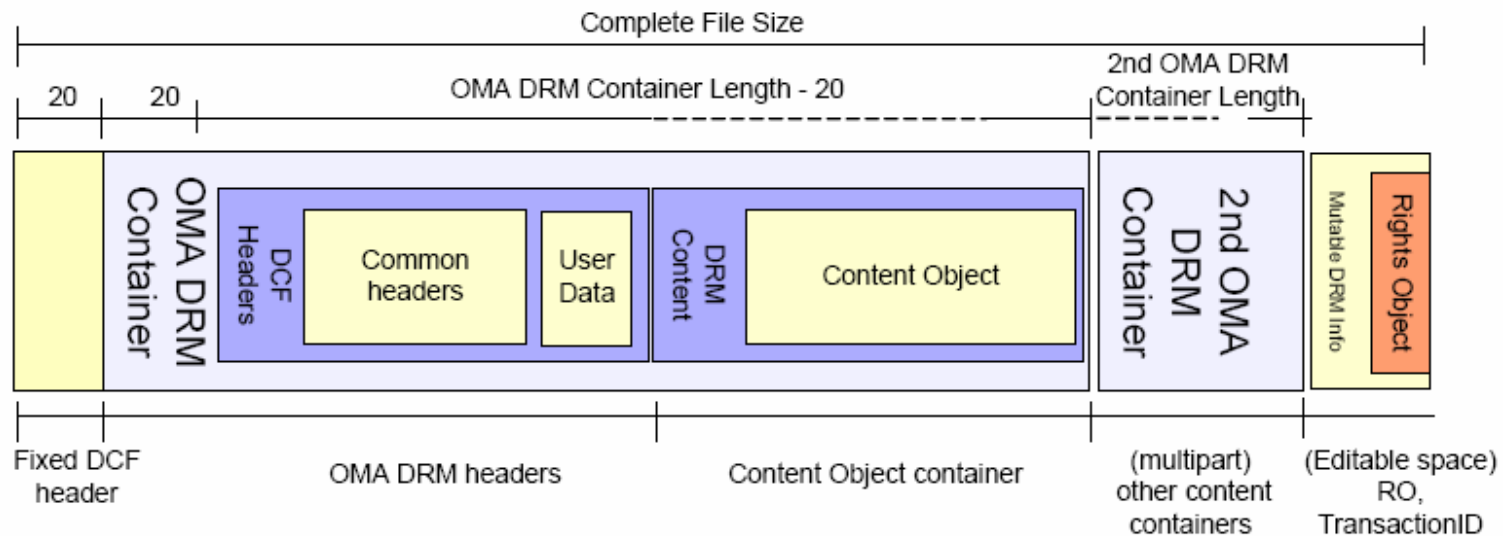
Superdistribution Step-by-Step



Detailed View on Transaction Tracking

□ DRM Agent reads and writes the Transaction ID

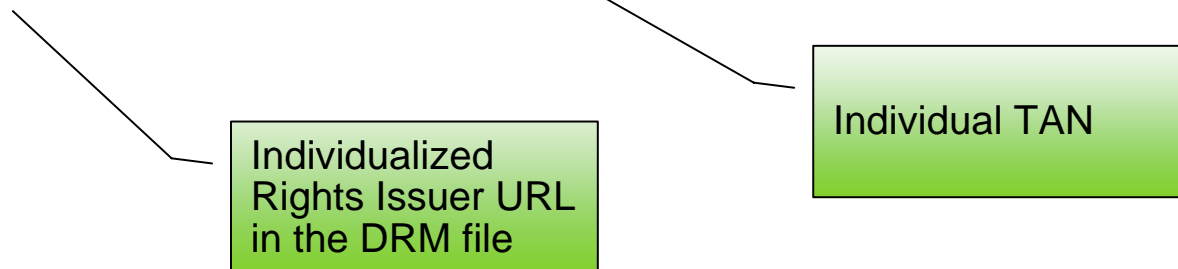
- *Each TransactionID (TAN) refers to a song, a user who has forwarded it and a user who has purchased the forwarded song.*
- *On each RO request, the TAN is read from the content file and transmitted to the Rights Issuer (RI).*
- *The RI delivers the RO with an included new TAN.*
- *The DRM Agent replaces the TAN in the content file (in the mutable DRM info box).*



Superdistribution also without OMA's Transaction Tracking

- ❑ **Current devices do not support Tracking yet**
 - *Transaction Tracking will be available at the end of 2007*
- ❑ **Workaround at DownloadStore4you:**
 - *Individualization of the Rights Issuer URL in the DRM file*
 - *The individual TAN will be inserted into the file during the download*
 - **Drawback:**
A user has to download the individualized file first before forwarding it

www.downloadstore4you.com/process/sell?tan=8078928114&ro



Fields of Application for Rewarded Superdistribution

Coffee Shop Scenario

- *People buy music with their phones in coffee shops and...*
- *...spread the music after leaving.*
- *Shop visitors gain rewards and the shops more revenue.*

Connecting Web 2.0 solutions with Superdistribution?

- *Communities like Youtube and MySpace easily activate users.*
- *This activity can be utilized in download shops through the offering of superdistribution options.*
- *Rewards could be given to any user, not only to buyers of content.*
- *Reward for resellers could be 10% of the purchase price, others only get 1-2% for their promotional activity.*

Thank you

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