Preventive measures against online infringement

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Why online infringement?

Volume

- Offline Piracy (300 million, 12%)
- Online Piracy (2106 million, 88%)
Copyright Protection System

Ministry of Culture, Sports & Tourism

Special Judicial Copyright Police
- Cracks down on piracy
- Investigates copyright violations before sending cases to prosecutors

Korea Copyright Commission
- Mediates disputes
- Appraises copyright violations
- Supports establishment of copyright policies
- Issues recommendations for correction including deletion of illegal online copies

Copyright Protection Center (of KOFOCO)
- Seizes and disposes of offline illegal copies
- Requests deletion of illegal online copies
- Monitors and requests technological measures to be taken by OSPs

Copyright Collective Management Organizations
- Protects rights of right holders
- Manages entrusted rights such as licensing and other rights

Public sector

Public + Private

Private sector
Illegal Copyrights Obstruction Program
• Automatic Content Searching System
• Content recognition based on feature-points
• Automatic mailing for content deletion
Operating Process

- Information searching
  - OSP
  - Bulletin board
  - Collecting posting information
  - Proof (Screen shot)

- Mailing

- Recognition

- Extraction of Feature points (DNA)

- Reporting

- Decision making
  - Based on the information
  - Attached file download
Automatic Content Searching

- Automatic searching for closed-type OSP (cyberlocker and P2P)
- Excel script editor for searching scenario modification
- Automatic searching for open-type OSP (UCC, blogs, and cafe)
- Collect posting information and proofs (screen shot)
- Content downloading function
- Automatic decompression
- Disk image file (iso) decompression, Special format (.xxx) file decoding
Content Recognition

- Extract feature-points (DNA) from Audio using centroid of frequency domain
- Extract feature-points (DNA) from Video using spatial and temporal information
- Extract feature-points (DNA) from analysis of structure sentence
- Recognition of Game S/W using hash and file feature
- Content recognition using whole or part of content
ICOP Monitoring screen
ICOP DB screen
• Automatic content searching system for closed-type OSP (P2P/cyberlocker)
• Feature-based audio content recognition

2009-2010
• Automatic content searching system for open-type OSP (Portal/UCC)
• Feature-based video content recognition

2011
• Open API
• Distributed processing
• Publication (text) and Game S/W recognition

2012
• Killer content warning system
• Offline crackdown App
• Overseas OSP monitoring system

2013
• Launch integrated ICOP Operation Center

2014
• ICOP Expand operations (Target OSP add)
ICOP Operation center

ICOP Servers
# Infringement prevention of scale by ICOP

<table>
<thead>
<tr>
<th>Postings</th>
<th>Files</th>
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<tbody>
<tr>
<td>Audio</td>
<td>4,426</td>
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<tr>
<td>Movie</td>
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<tr>
<td>TV Show</td>
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<tr>
<td>Text</td>
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<tr>
<td>Game</td>
<td>10,597</td>
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<tr>
<td>Comic</td>
<td>13,779</td>
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<td>S/W</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>255,866</td>
</tr>
</tbody>
</table>

Infringement prevention of scale : $ 914,356

* $\sum$ (Unit price of licensed products \times Postings)
Thank you

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