New skills for new jobs in the forest sector

Drymos

Tsimpouris Charalampos, PhD Student
University of Patras, Wire Communications Laboratory
1. Mobile application for educational purposes

2. Supporting web-site
Participants

1. Prof. Nikos Fakotakis
   *Coordination manager*

2. Charalampos Tsimpouris
   *Software engineer*

3. Olga Tzortzakaki
   *Biologist,*

4. Dr. Iosif Mporas
   *Audio engineer*

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Participants' expertise

1. prof. Nikos Fakotakis
   *LIFE AMIBIO Project coordinator*

2. Charalampos Tsipouris
   *Freelancer in web and mobile design, PhD Student*

3. Olga Tzortzakaki
   *Biologist, PhD Student, “Urban and peri-urban biodiversity patterns”*

4. Dr. Iosif Mporas
   *Speech & Audio Processing*

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New skills for new jobs in the forest sector, **Drymos**

**Tsmpouris Charalampos**, PhD Student, University of Patras
Web site features

- LAMP Site → Easy to duplicate
  - Drupal 7 → Community based, open source CMS

- More than 120 Species included
  - Easy to add more

- Numerous species attributes
  - Group, Family, Common Name, Description, Image, Sample audio, Male/Female body length, Male/Female wingspan, Habitat, References
  - Easy to add more under experts consideration

- In-site search capable for all species attributes
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- Phonegap/Cordova based
- Database is downloaded locally
  - Can be used off-line
- All species attributes are available
  - Sample audio also downloaded
Why Phonegap/Cordova

- Same base source code for different platforms Android, Windows Mobile, iOS
  - Visually consistent
  - Apache License (v2.0) free for private or public use, or patent
Bird identification, how

- Short-time analysis of audio recordings
  - Hidden Markov model based pattern recognition

- Hidden Markov Model Toolkit (HTK)
  - Free to use for researching purposes

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Bird identification, where

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**Tsimplouris Charalampos**, PhD Student, University of Patras
Bird identification, why

Pros:
- One place to update identification software
- Difficult to implement HTK identification software on different platforms
  - Even more to difficult to support for different versions

Cons:
- Identification is an “online-only” capability
Future trends

- Implement educational games
  - “Hear it, find it!”
  - “Who Wants To Be A Millionaire” with bird-related information

- Implement client-side off-line identification

- Improve identification with more species
Thank you for your attention