



Online Image Annotation

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LIRMM - MARBEC

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- Le projet
 - Cahier des charges
 - Proposition
- L'application
 - L'architecture
 - L'interface
 - La gestion
 - Le serveur
- Les premiers retours
- En conclusion



Le projet - Cahier des charges

- Être multi-utilisateurs
- Traçabilité facile de toutes les opérations
- Être utilisable par une personne ayant un niveau en informatique moyen
- Être utilisable par une personne ne connaissant pas bien les poissons



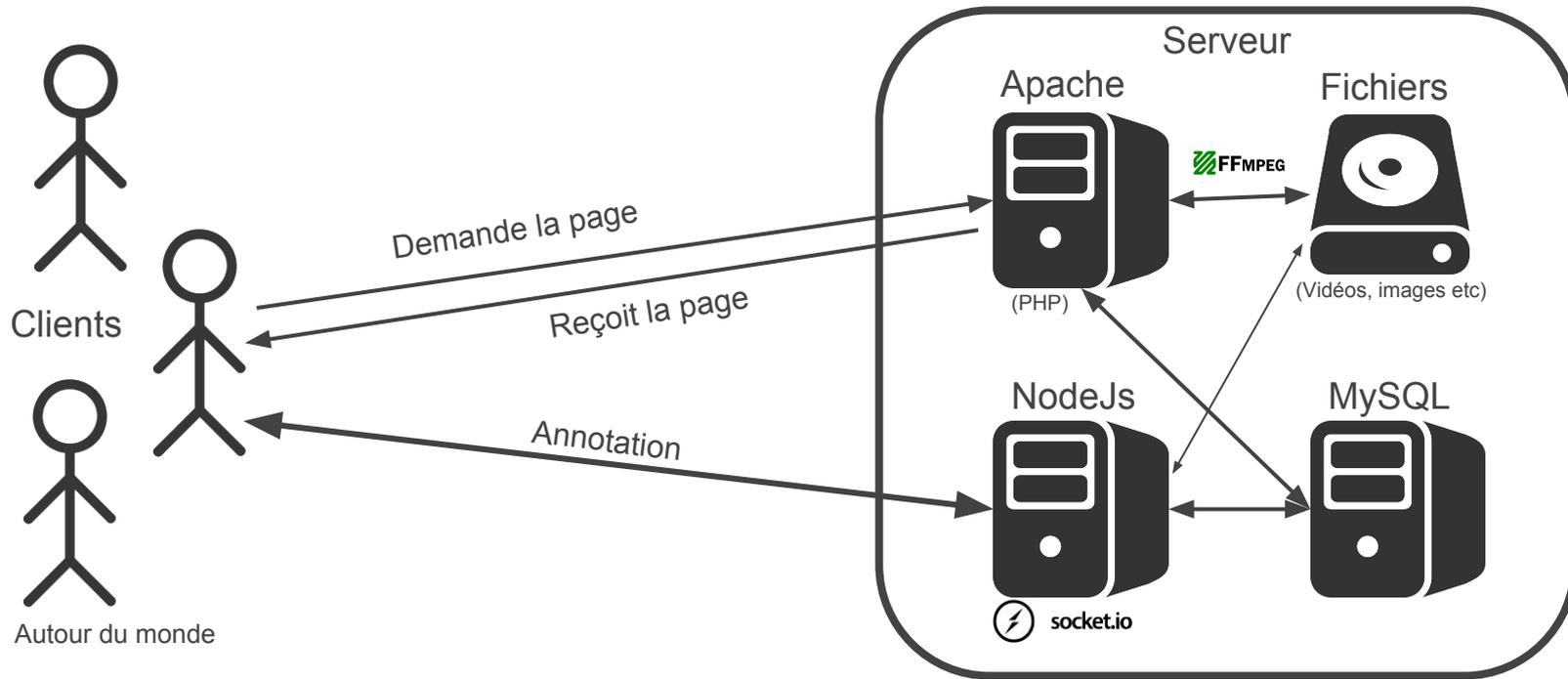
Le projet - Proposition

Plate-forme Web

- Navigateur web uniquement pour le client
- Windows, Mac, Linux ...
- Gestion utilisateur simple
- Tout est géré par le serveur



Le projet - Architecture

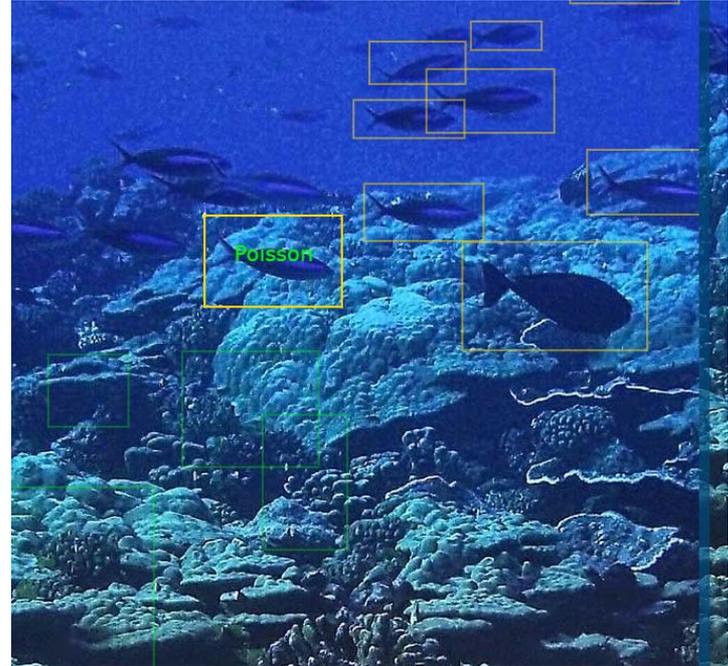


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L'application - Interface

- Image taille réelle
 - Aucune déformation
 - Scrollbar
- Balise HTML5 (canvas)
- JavaScript exclusivement



L'application - Interface

Home Files Profile Logout

Family Frame id: 50 Go Frame : 116 / 1566

Odonus_niger

Naso_hexacanthus

Odonus_niger

Acanthurus_tennentii

Odonus_niger

Odonus_niger

Tools Box | Frame : 116 / 1566

Selected : unknown_fish

Undo Redo View All

Remove	P1: x: 2 y: 126 P2: x: 369 y: 378 Species: Odonus_niger
Remove	P1: x: 726 y: 561 P2: x: 1025 y: 873 Species: Odonus_niger
Remove	P1: x: 951 y: 362 P2: x: 1151 y: 557 Species: Odonus_niger
Remove	P1: x: 1454 y: 771 P2: x: 1718 y: 1005 Species: Odonus_niger
Remove	P1: x: 1257 y: -1 P2: x: 1703 y: 186 Species: Naso_hexacanthus
Remove	P1: x: 462 y: 453 P2: x: 665 y: 632 Species: Acanthurus_tennentii



L'application - Interface

Outils :

Selected : **Acanthurus_leucostemon**

Famille		
Acanthuridae	Acanthurus	<input type="radio"/> nigricauda Adult <input type="radio"/> Inconus
Aulostomidae	Naso	<input checked="" type="radio"/> leucostemon <input type="radio"/> Adult <input type="radio"/> Inconus
Balistidae	Paracanthurus	<input type="radio"/> lineatus Adult <input type="radio"/> Inconus
Bleniidae	Zebrasoma	<input type="radio"/> tennenti Adult <input type="radio"/> Inconus

Undo Redo View All

marbec Accueil Documentation Profils Logout

Outils :

Selected :

Family Undo Redo View All

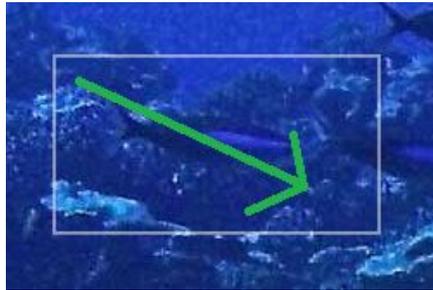
- Inconus P1 x 505 y 505 P2 x 750 y 750 Espece
- Inconus P1 x 255 y 255 P2 x 421 y 421 Espece
- Inconus P1 x 601 y 601 P2 x 767 y 767 Espece
- Inconus P1 x 257 y 257 P2 x 555 y 555 Espece
- Inconus P1 x 470 y 470 P2 x 637 y 637 Espece

Bonjour

Inconus

Inconus

Inconus



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Outils :

Selected :

Family Undo Redo View All

- Inconus P1 x 505 y 505 P2 x 750 y 750 Espece
- Inconus P1 x 255 y 255 P2 x 421 y 421 Espece
- Inconus P1 x 601 y 601 P2 x 767 y 767 Espece
- Inconus P1 x 257 y 257 P2 x 555 y 555 Espece
- Inconus P1 x 470 y 470 P2 x 637 y 637 Espece

Bonjour

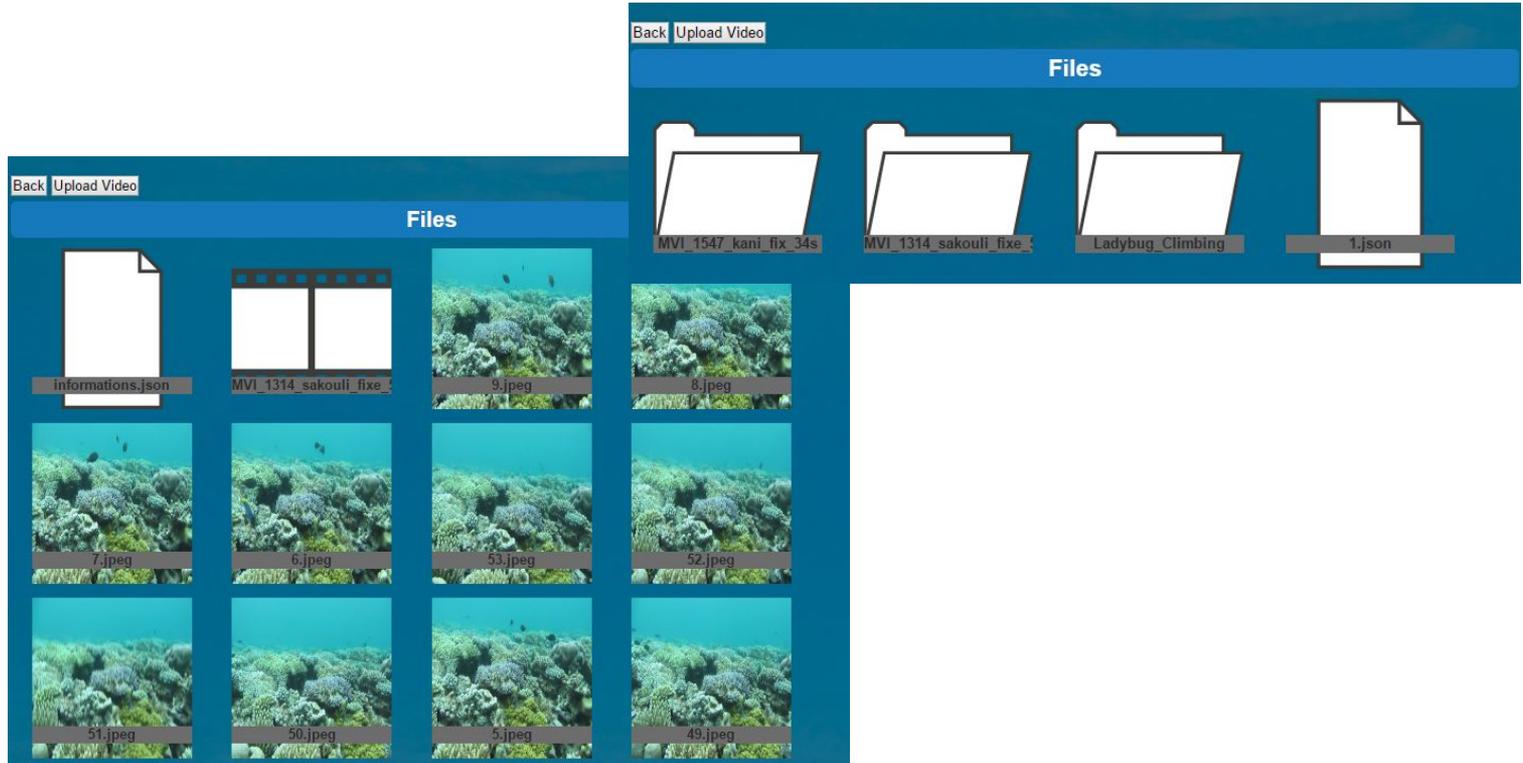
Inconus

Inconus

Inconus



L'application - Interface



L'application - Interface

Name:	MVI_0606.MP4
Frame per second (video):	25
Time (Second):	17.84
Extraction frequency (n/sec)	2
NbFrame extract:	37
Demo	No

Enable as a test

Get simplified files

Id species	Number of annotation
Dascyllus_trimaculatus_juv	338
Archamia_fucata	97
Thalassoma_lunare	44
Dascyllus_trimaculatus	11
Amphiprion_akallopisos	65
Caesio_varilineata	1
Chromis_nigroanalis	2
unknown_fish	1
Total	559



L'application - Gestion

Ajout d'espèces



Calling the WoRMS webservice from PHP5

This tutorial assumes you are using any webserver with PHP5 installed and working properly.

Step 1: Enable the soap extension in your php.ini

If you downloaded pre-compiled platform binaries, they may have ext/soap compiled in but not loaded, so you'll need to update your PHP configuration to load ext/soap. Edit your php.ini, and look for the Dynamic Extensions section. Add a line (or remove it if it's already there) to the end of the list:

```
extension=php_soap.dll
```

If you haven't previously loaded any optional extensions, you may also have to set the extension_dir directive to point to the directory containing the extension libraries, including php_soap, for example: extension_dir="C:/php/ext/" (use forward slashes even on Windows)

Don't try to put directory information in the extension directive; use extension_dir if necessary.

```
$client = new SoapClient("http://www.marinespecies.org/ahia.php?mode=ahia1");
$ahiaid=$client->getAhiaID("Solea solea");
$species=$client->getAhiaSpeciesID($ahiaid);
echo "AhiaID: ($id): " . $species["AhiaID"] . "\n";
echo "SpeciesID: ($id): " . $species["SpeciesID"] . "\n";
echo "Authority: ($id): " . $species["Authority"] . "\n";
echo "Name: ($id): " . $species["Name"] . "\n";
echo "Valid name: ($id): " . $species["Valid name"] . "\n";
echo "Valid authority: ($id): " . $species["Valid authority"] . "\n";
echo "Classification ($id): " . $species["Classification"] . "\n";
echo "Classification ($id): " . $species["Classification"] . "\n";
function show_classification($id) {
    echo $client->getExt(" " . $id . "\n");
    if ($client->getExt(" " . $id . "\n")) {
        show_classification($id);
    }
}
```

Step 3: Run the script

It should return something like this:

```
AhiaID: 127160
Default name: Solea solea (Linnaeus, 1758)
URL: http://www.marinespecies.org/ahia.php?mode=ahia1&id=127160
Accepted name: Solea solea (Linnaeus, 1758)
Classification: Animalia (Kingdom) > Chordata (Phylum) > Vertebrata (Subphylum) > Gnathostomata (Superclass) > Pisces (Superclass) > Actinopterygii (Class) > Neuronectiformes (Order) > Soleidae (Family) > Solea (Genus) > Solea solea (Species) >
```

Download this example.

Add Species

Family	Genus
<input type="radio"/>	<input type="radio"/>

Amphiprion

Name

allardi

Unknown	Male	Female
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Adult	Juvenile
<input type="radio"/>	<input type="radio"/>

ID Object

Amphiprion_allardi

Add



L'application - Gestion

Users				
ID	Name	e-mail	Rank	Edit
1	panda	panda@panda.fr	Admin	<input type="button" value="Ed"/>
2	clement	clement.desgenetez@lirmm.fr	Utilisateur non validé	<input type="button" value="Ed"/>

Users				
ID	Name	e-mail	Rank	Edit
2	<input type="text" value="clement"/>	<input type="text" value="clement.desgenetez@lirm"/>	<input type="text" value="1"/>	<input type="button" value="Edit"/>

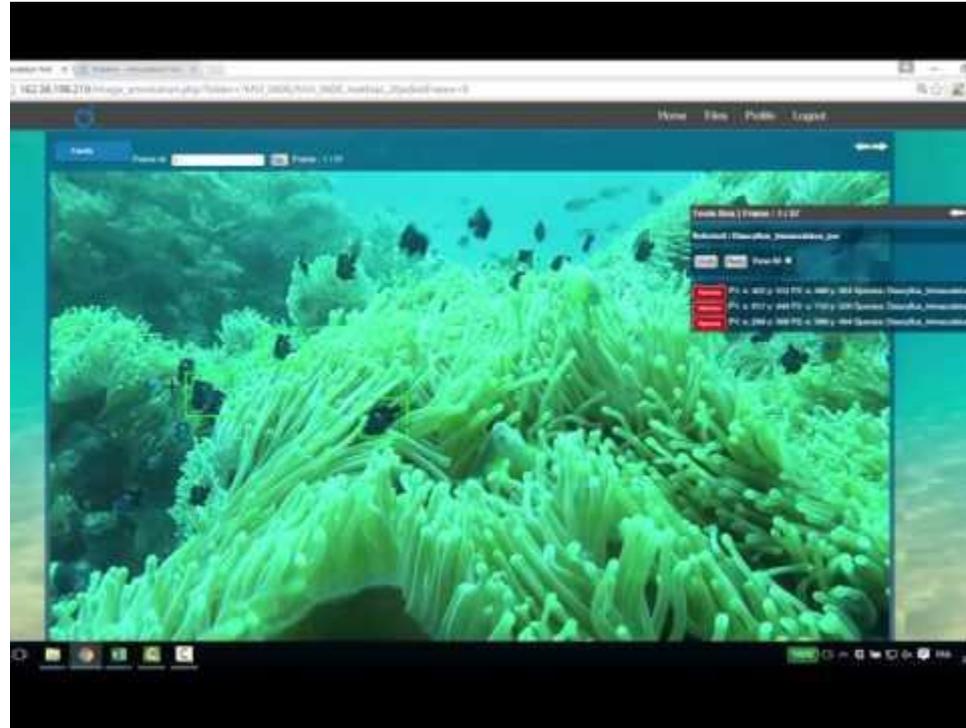
Rank list	
id_Rank	Rank
0	Utilisateur non validé
1	Annoteur
2	Modérateur
3	Admin

marbec	
Infos	
Nom : clement	Rank : Utilisateur non validé

Annoter images	
marbec	
Infos	
Nom : clement	Rank : Annoteur



L'application - Démonstration



L'application - Serveur

- Indépendant du serveur Apache
- Crée des liens continus avec les clients
- Enregistre les fichiers à chaque action
- Vérifie les droits par jetons temporaires
- Fichier de logs journalier

```
Server launch...
Client connected. Client(s) : 1
Valid Token
changeFrame
add
Valid Token
{"type":"data","idFrame":2,"bigData":[{"defineItem":"Inconus","data":{"p1":{"x":555,"y":450},"p2":{"x":750,"y":607}}},{defineItem":"Inconus","data":{"p1":{"x":255,"y":428},"p2":{"x":421,"y":561}}},{defineItem":"Inconus","data":{"p1":{"x":601,"y":67},"p2":{"x":767,"y":301}}},{defineItem":"Bonjour","data":{"p1":{"x":257,"y":186},"p2":{"x":555,"y":375}}},{defineItem":"Inconus","data":{"p1":{"x":470,"y":300},"p2":{"x":637,"y":433}}},{data":{"p1":{"x":393,"y":39},"p2":{"x":543,"y":135}}}]
File saved
add
Valid Token
{"type":"data","idFrame":2,"bigData":[{"defineItem":"Inconus","data":{"p1":{"x":555,"y":450},"p2":{"x":750,"y":607}}},{defineItem":"Inconus","data":{"p1":{"x":255,"y":428},"p2":{"x":421,"y":561}}},{defineItem":"Inconus","data":{"p1":{"x":601,"y":67},"p2":{"x":767,"y":301}}},{defineItem":"Bonjour","data":{"p1":{"x":257,"y":186},"p2":{"x":555,"y":375}}},{defineItem":"Inconus","data":{"p1":{"x":470,"y":300},"p2":{"x":637,"y":433}}},{data":{"p1":{"x":393,"y":39},"p2":{"x":543,"y":135}}},{data":{"p1":{"x":599,"y":70},"p2":{"x":744,"y":150}}}]
File saved
remove
Valid Token
{"type":"data","idFrame":2,"bigData":[{"defineItem":"Inconus","data":{"p1":{"x":555,"y":450},"p2":{"x":750,"y":607}}},{defineItem":"Inconus","data":{"p1":{"x":255,"y":428},"p2":{"x":421,"y":561}}},{defineItem":"Inconus","data":{"p1":{"x":601,"y":67},"p2":{"x":767,"y":301}}},{defineItem":"Bonjour","data":{"p1":{"x":257,"y":186},"p2":{"x":555,"y":375}}},{defineItem":"Inconus","data":{"p1":{"x":470,"y":300},"p2":{"x":637,"y":433}}}]
File saved
remove
Valid Token
{"type":"data","idFrame":2,"bigData":[{"defineItem":"Inconus","data":{"p1":{"x":555,"y":450},"p2":{"x":750,"y":607}}},{defineItem":"Inconus","data":{"p1":{"x":255,"y":428},"p2":{"x":421,"y":561}}},{defineItem":"Inconus","data":{"p1":{"x":601,"y":67},"p2":{"x":767,"y":301}}},{defineItem":"Bonjour","data":{"p1":{"x":257,"y":186},"p2":{"x":555,"y":375}}},{defineItem":"Inconus","data":{"p1":{"x":470,"y":300},"p2":{"x":637,"y":433}}}]
File saved
Client disconnect. Client(s) : 0
```



L'application - Serveur

- Json
 - Sauvegarde
 - Communication
- MySQL
 - Jeton
- Web Socket
 - Socket.IO

```
▼ object {3}
  type : data
  idFrame : 9
  ▼ bigData [3]
    ▼ 0 {2}
      defineItem : unknown_fish
      ▼ data {2}
        ▼ p1 {2}
          x : 533
          y : 102
        ▼ p2 {2}
          x : 635
          y : 178
      ► 1 {2}
      ► 2 {2}
```

```
D:\LIAPP_stage\18_04_16\NodeJS_Server>node server.js
Server launch...
Client connected. Client(s) : 1
panda
add
{"type":"data","idFrame":1,"bigData":[{"defineItem":"Inconus","data":{"p1":{"x":133,"y":325},"p2":{"x":454,"y":560}}},{"defineItem":"Panda","data":{"p1":{"x":539,"y":64},"p2":{"x":727,"y":184}}},{"defineItem":"Panda","data":{"p1":{"x":742,"y":279},"p2":{"x":942,"y":456}}},{"defineItem":"Inconus","data":{"p1":{"x":1410,"y":391},"p2":{"x":572,"y":487}}},{"defineItem":"Autre","data":{"p1":{"x":555,"y":508},"p2":{"x":688,"y":658}}}]
File saved
```



Les premiers retours

Des chiffres :

- 45127 Vignettes par 3 personnes en 5 jours
- 3000 Vignettes par jours et par personne contre 500

Avis :

- Fluide et rapide
- Intuitif

Amélioration à prévoir :

- Gestion des fichiers plus poussée
- Compatibilité tactile



Conclusion

