






The image button in all is states

4D Summit 2018

	Niveau 1	Niveau 2	Niveau 3	Niveau 4	Libre	Ass Form	Profs FNEY	Anciens	Semaine	Weekend	Jour
	1	2	3	4	AL	AF	PF	A	S	W	J

State 

-  Ok
-  Cancelled
-  Not sure
-  Reported





Olivier Grimbert

CTO, Protée sarl

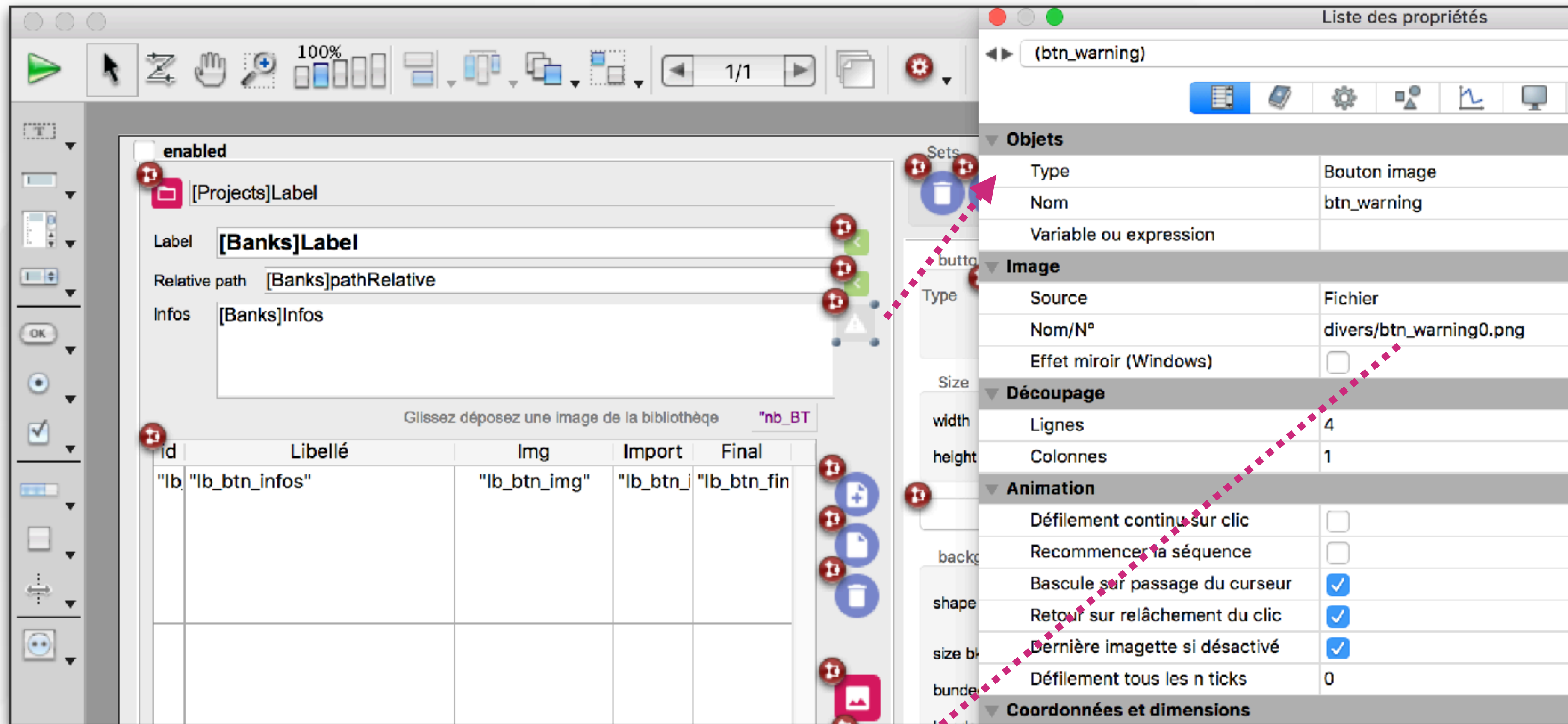
"get me", "set me" and "toggle
me" are in a boat :
Who will wet is shirt the
first ?

Introduction

- What is an image button ?
- Why dynamic buttons ?
- Examples of use in dynamic

Introduction

What is an image button ?



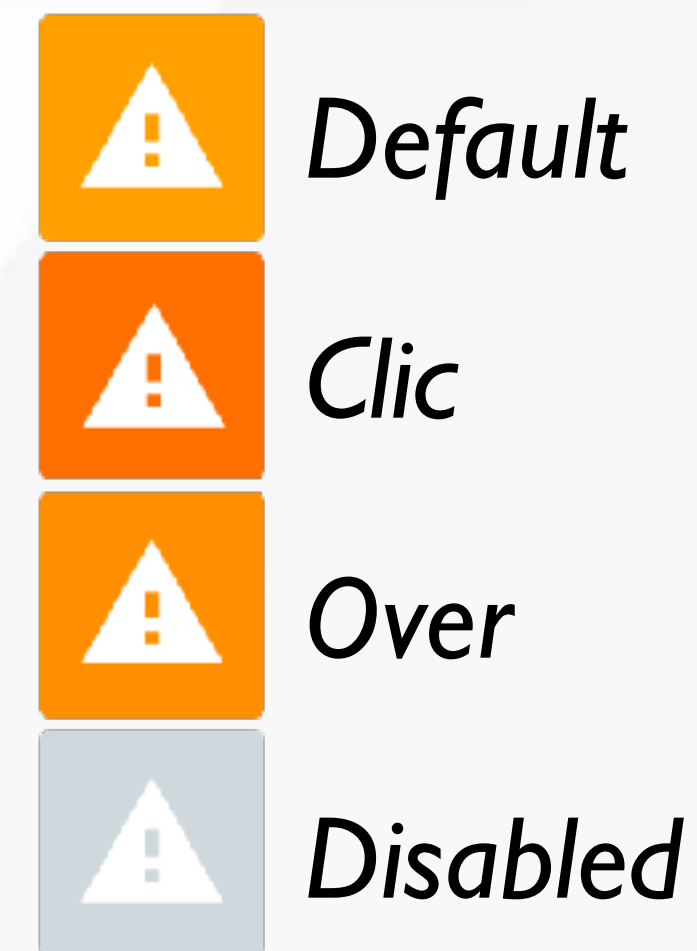
Button's definition

Resource

*4 lines for
Default, Clic,
Over, Disabled*

*Default for an
image button*

Stored as format :
1;4;#divers/btn_warning1.png;240



Default

Clic

Over

Disabled

Introduction

Why dynamic buttons ?

« New record » indicator



« Warning » indicator



« Locked » indicator



« No / Yes » indicator

NO

YES

On off indicator



Others...

x_btn_toggleSet (\$ptrButton; \$v)

1;4;#divers/btn_warning{string(\$v)}.png;240



1;4;#divers/btn_warning**1**.png;240



1;4;#divers/btn_warning**0**.png;240



x_btn_toggleSet (\$ptrButton;\$v)

The first to wet is shirt !

```
// Paramètres  
// $1 <PTR> : sur bouton image  
// $2 <INT> : valeur du toggle ## Ne marche que de 0 à 9 ##  
// -----
```

```
C_POINTER($ptrButton)  
C_LONGINT($value)  
$ptrButton:=$1  
$value:=$2
```

```
1;4;#divers/btn_warning{string($v)}.png;240
```

```
C_TEXT($btnFormat)  
C_LONGINT($k)  
$btnFormat:=OBJECT Get format($PtrButton->)  
$k:=Position(".png";$btnFormat)  
OBJECT SET FORMAT($PtrButton->;Substring($btnFormat;1;$k-2)+String($Value)  
+Substring($btnFormat;$k))
```

A

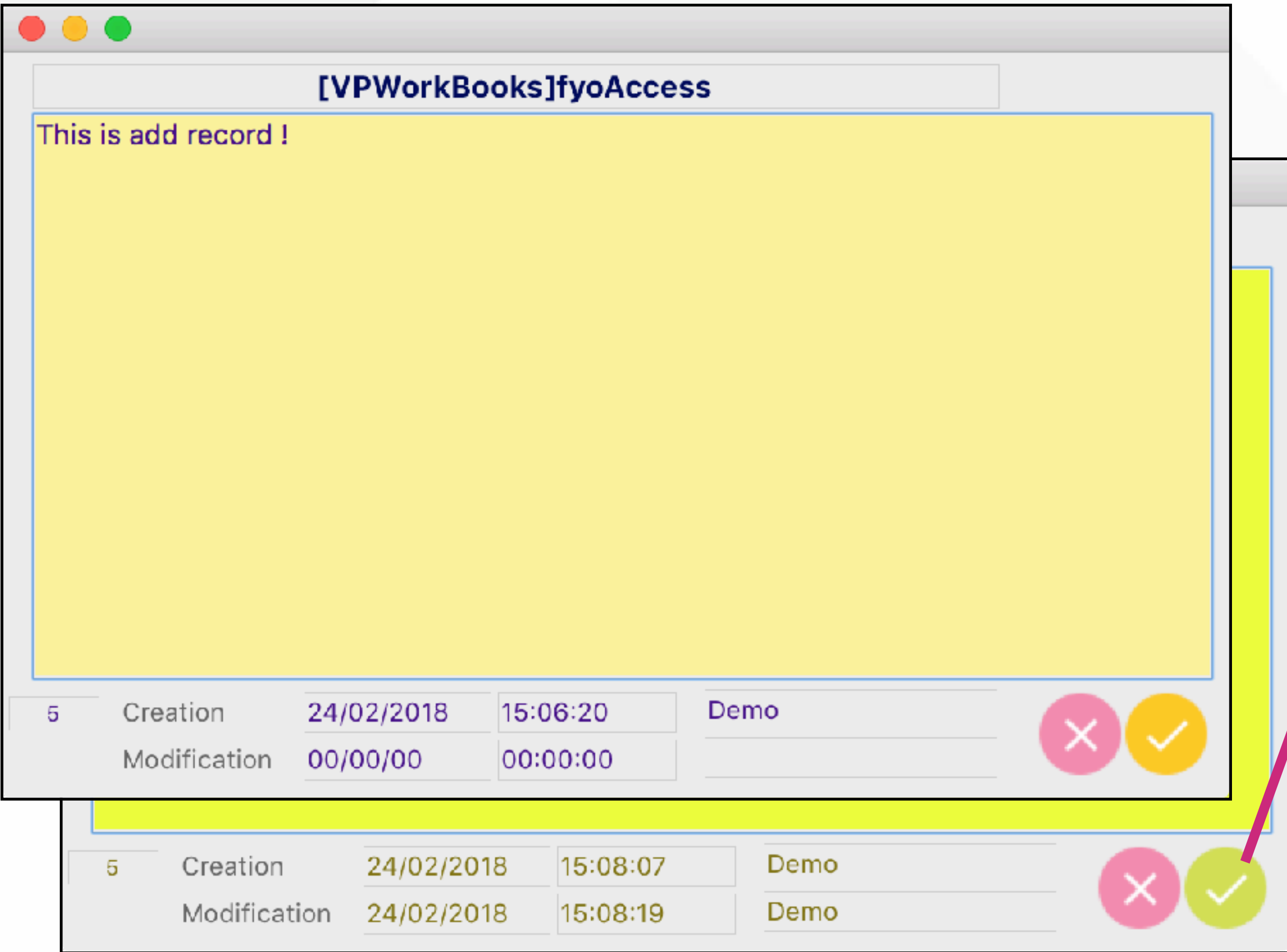


Introduction

Playing at low level...



« New record » indicator



Case of

```
: (Form event=0n_Load)  
$isNew:=Is new record(Current form table->  
x_btn_toggleSet (self;Num($isNew))
```

```
: (Form event=0n_Clicked)  
ACCEPT
```

End case



« Warning » indicator



Historisation1	
<u>id</u>	2 ³²
Cdate	17
Ctime	
Coperator	A
Mdate	17
Mtime	
Moperator	A
noTable	2 ³²
noField	2 ³²
comment	T
idRecord	2 ³²

v_magik_warning_T (-> [VPWorkBooks]Label)

VPWorkBooks

ID : 22290 Type **Crab** Colors State

Label : althaein

Niveau 1 Niveau 2 Niveau 3

1 2 3

[VPWorkBooks]Label

Not sure for that label. To be confirmed.
Before next sunday 25th of february 2018.

5	Creation	24/02/2018	14:39:58	Demo
	Modification	24/02/2018	14:40:55	Demo



« *v_magik_warning_T* »

Case of

: (\$evt=On_Load)

\$ptrField := \$1

\$noTable := Table(\$ptrField)

\$id := Field(\$noTable;1) ->

\$noField := Field(\$ptrField)

QUERY ([Historisation1]; [Historisation1]noTable=\$noTable;*)

QUERY ([Historisation1]; [Historisation1]noField=\$noField;*)

QUERY ([Historisation1]; [Historisation1]idRecord=\$id)

\$isOk := (Records in selection([Historisation1])#0)

x_btn_toggleSet (Self; Num(\$isOk))

B



Introduction

Examples of uses in dynamic... in HDI :

- « New record » indicator
- « Warning » indicator

Explication

- Methods
- Content's discussion
- Example of toggle
- Properties
 - easy to manipulate
 - A variable... without a variable !

Explication

Methods

- ***x_btn_toggleSet*** (*\$ptrButton*; *\$value*)
- *\$value* := ***x_btn_toggleRead*** (*\$ptrButton*)
- *\$value* := ***x_btn_toggleToggle*** (*\$ptrButton*; *\$modulo*)

C



Explication

Content's discussion

Explication

Properties

1) *So easy to use*

2) *A variable... without a variable !*

- ***x_btn_toggleSet*** (***\$ptrButton***; ***\$value***)
- ***\$value := x_btn_toggleRead*** (***\$ptrButton***)



Demonstration

- HDI Simple toggle
- HDI Modulo N toggle
- In real life...
 - Help toggle (and « embedded variable »)
 - 4D Write Pro widget toggle (and « embedded variable »)
 - Warning manager (already seen)
 - Historics manager



High level - popups

- generic popup on button... dynamic, with icons
- Material's generation
- Applications in real life... everywhere !
 - Button with apparence related to states
 - Popup with icons
 - Generic method
 - Material's generation with proTools
 - Example
- But... What is missing ?

High level - popups

Generic Popup on
button... dynamic!

State

- ✓ Ok
- ✗ Cancelled
- ✓ Not sure
- ✓ Reported

actif

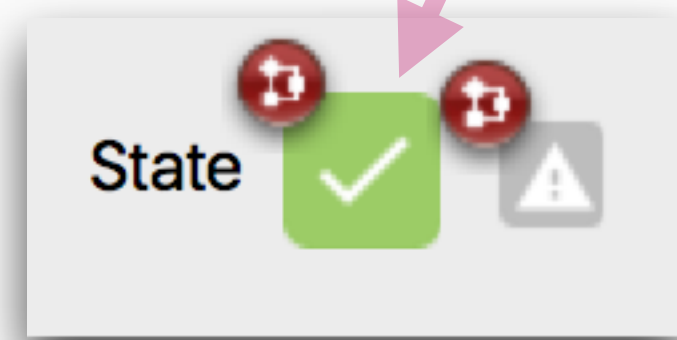
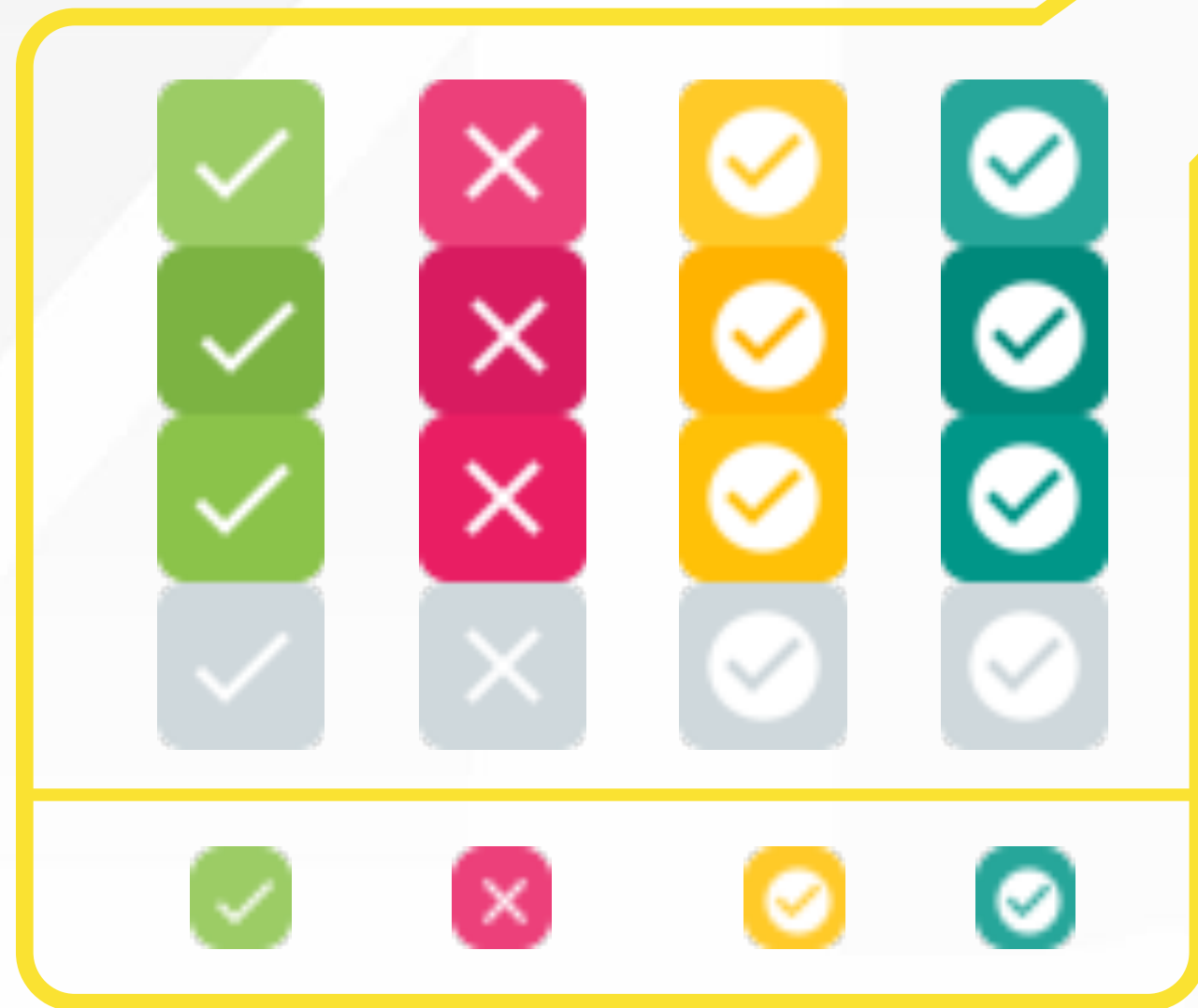
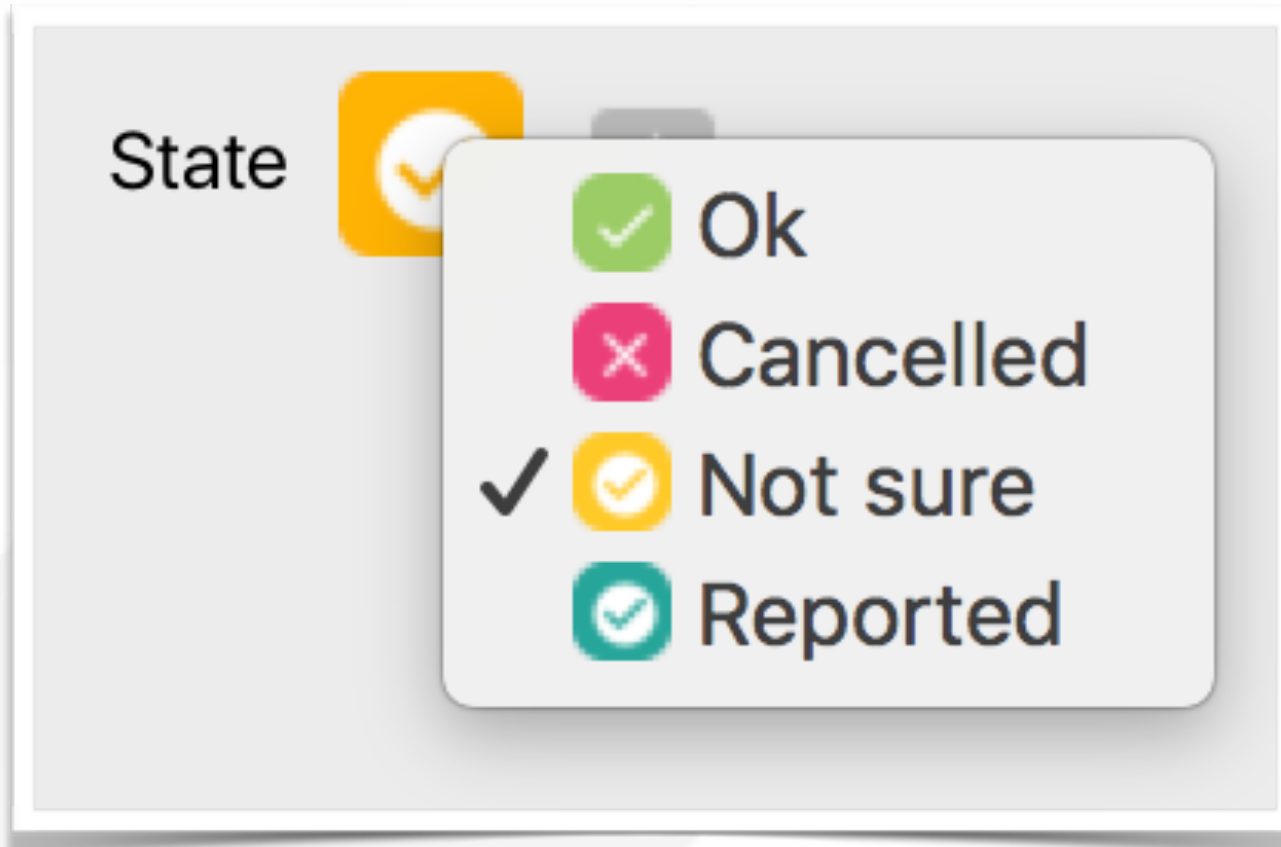
xxx

✓ **actif**

désisté

non diplômé

diplômé



Materials

- btn_state0.png à btn_state3.png
- icn_state0.png à icn_state3.png

Array Text

- gives labels for items
- gives the number of items

```

ARRAY TEXT (<>T_states;0)
APPEND TO ARRAY (<>T_states;"Ok")
APPEND TO ARRAY (<>T_states;"Cancelled")
APPEND TO ARRAY (<>T_states;"Not sure")
APPEND TO ARRAY (<>T_states;"Reported")

```

```
C_TEXT ($rscPath)
```

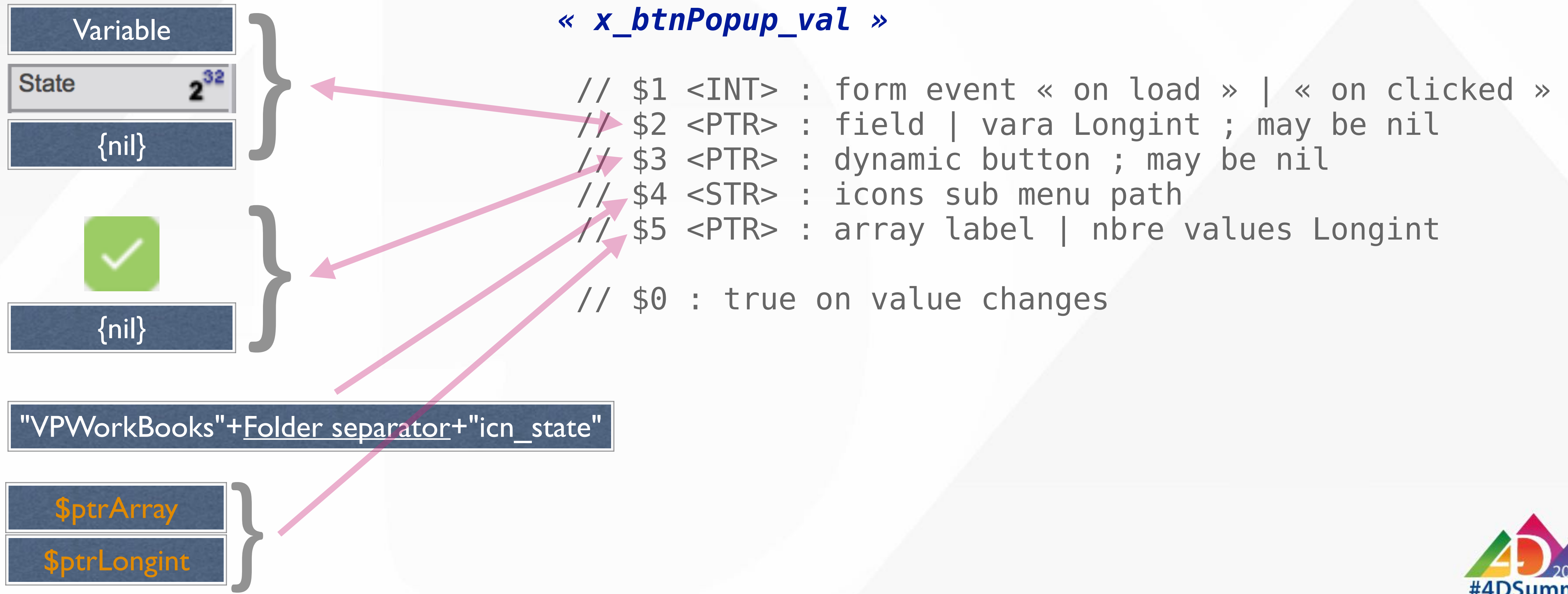
```
$rscPath:="VPWorkBooks"+Folder separator"icn_state"
```

```
x_btnPopup_val (Form event; ->[VPWorkBooks]State;Self;$rscPath; -><>T_states)
```

```

C_TEXT ($rscPath)
$rscPath := "VPWorkBooks" + Folder separator + "icn_state"
If (x_btnPopup_val (Form event; -> [VPWorkBooks]State; Self; $rscPath; -><>T_states))
    // TO DO on value changes
End if

```

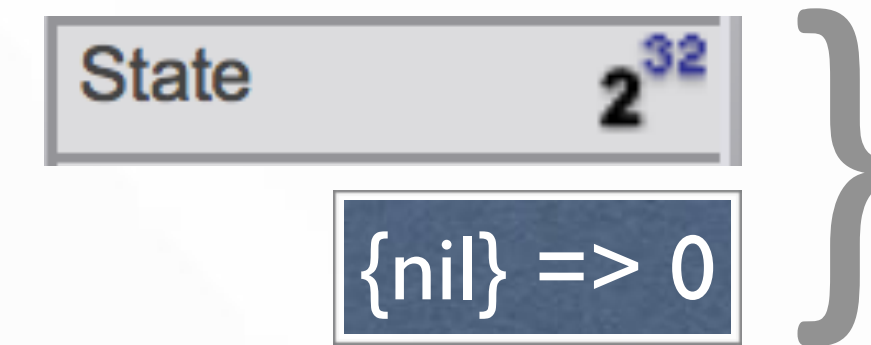


On Load

Update button state with data
If button not nil !

`x_btnPopup_val` (On_Load; \$ptrData; \$ptrBtn)

Data

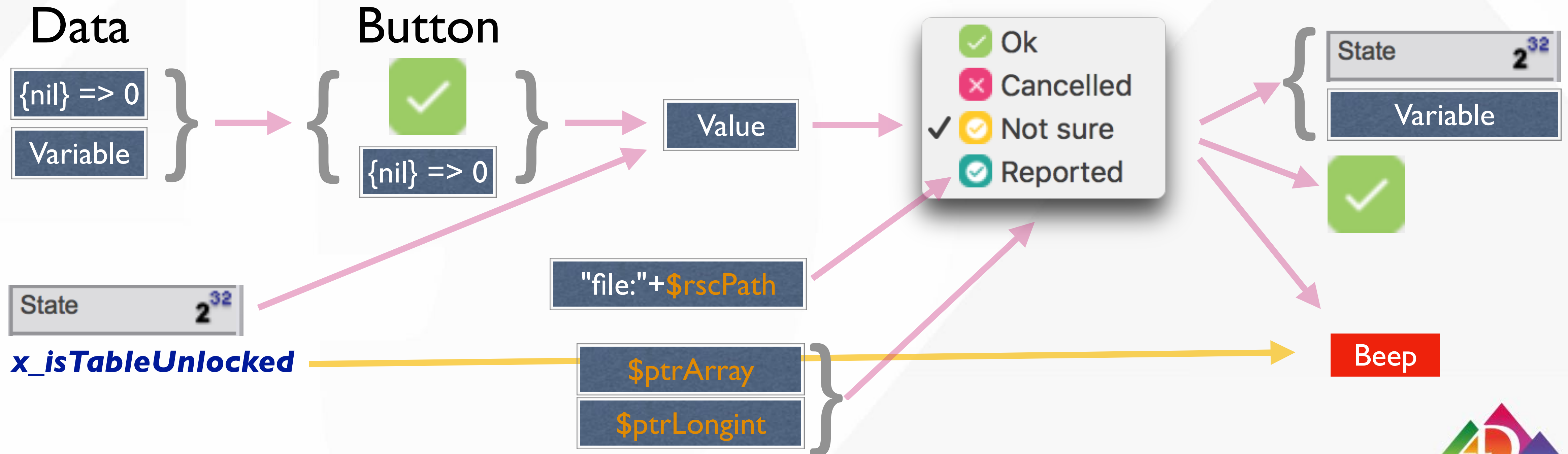


Button



On Clicked

`x_btnPopup_val` (On_Clicked; \$ptrData; \$ptrBtn; \$rscPath; \$ptrArray)

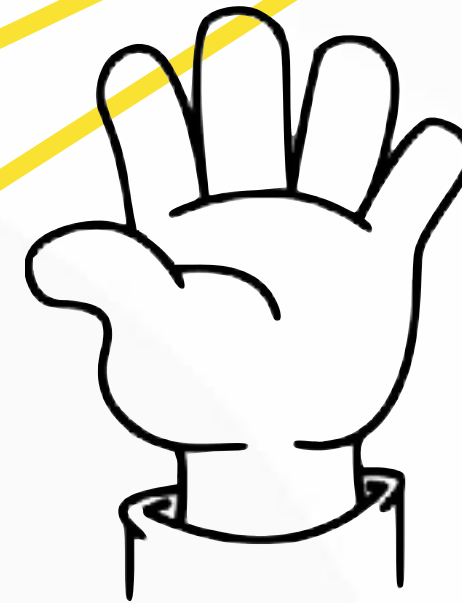


High level - popups

Material's generation

Materials

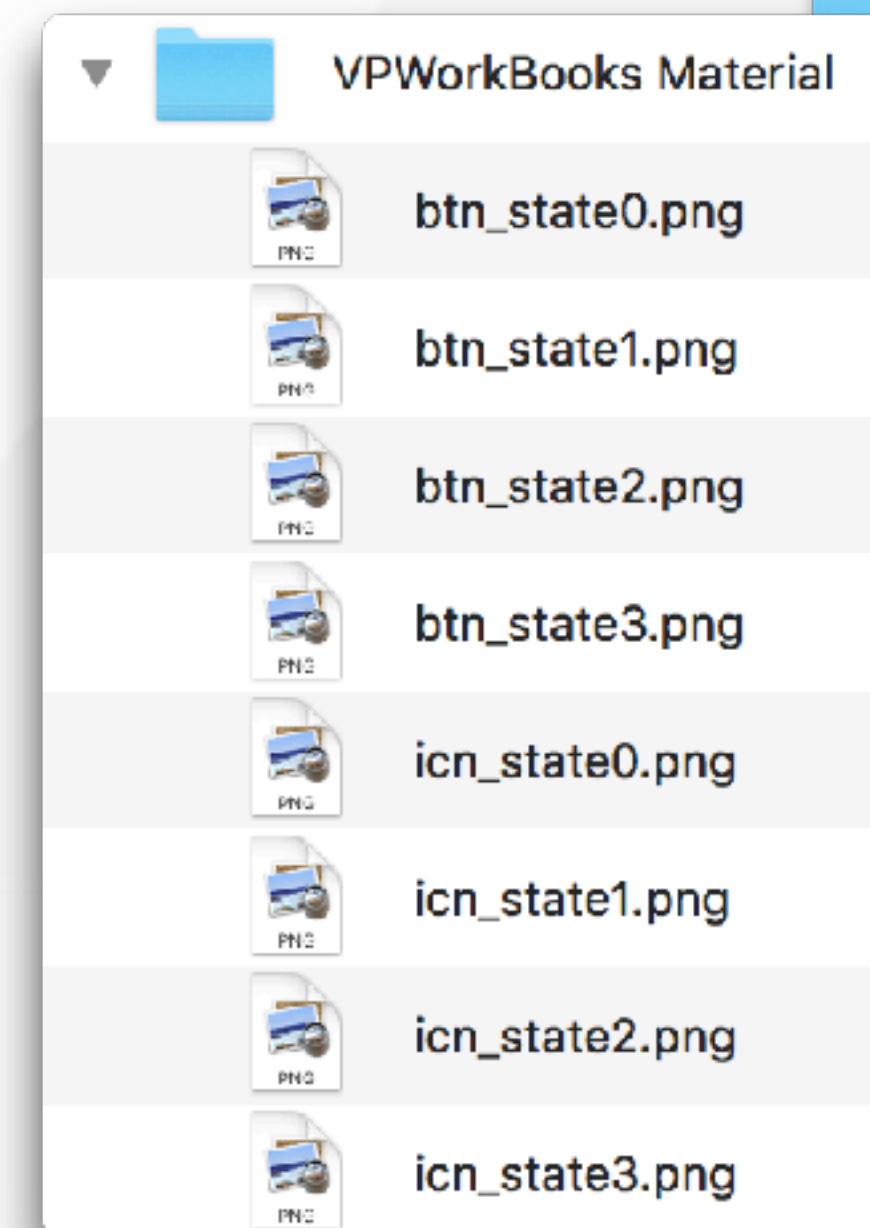
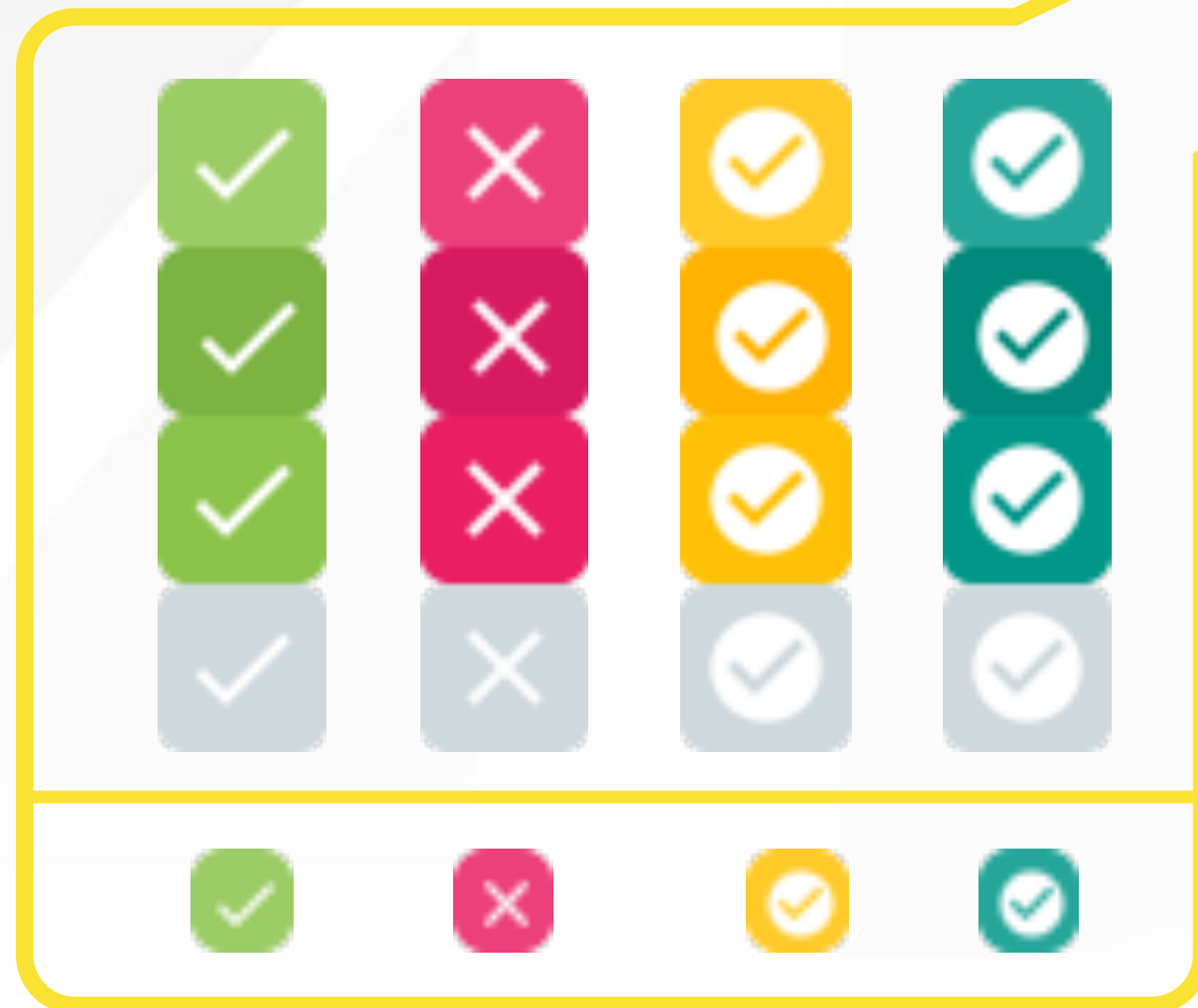
- btn_state0.png à btn_state3.png
- icn_state0.png à icn_state3.png



Durty hands



proTools



Banks (List modification)

enabled

SUMMIT 2018 RSR HDI

Label: **States labels**

Relative path: VPWorkBooks/

Infos:

Glissez déposez une image de la bibliothèque 5

Libellé	Img	Import	Final
state0.png ic_check_white_36dp.png wh 144, 144			<input checked="" type="checkbox"/>
state1.png ic_close_white_36dp.png wh 144, 144			<input checked="" type="checkbox"/>
state2.png ic_check_circle_white_36dp.png wh 144, 144			<input checked="" type="checkbox"/>
state3.png ic_check_circle_white_36dp.png wh 144, 144			<input checked="" type="checkbox"/>
state4.png wh 0, 0			<input type="checkbox"/>

Sets

BTN

1) BTN (btn → wh 30, 30)
2) ICN (icn → wh 16, 16)

button

Type: buttons 4D

deb fileName: btn_

popup file name:

Size

width: 30

height: 30

Default settings

background

shape: rectangle

size bkg %: 100

bunded x: 5

bunded y: 5

stroke: 2

Image

size img %: 80

brightness default %: 0

click %: 20

over %: 55

disabled %: 25

disabled is BW

offest on clic

texte

police: Calibri

couleur:

taille %: 70

bold underline

italic strike

default

click

over

disabled

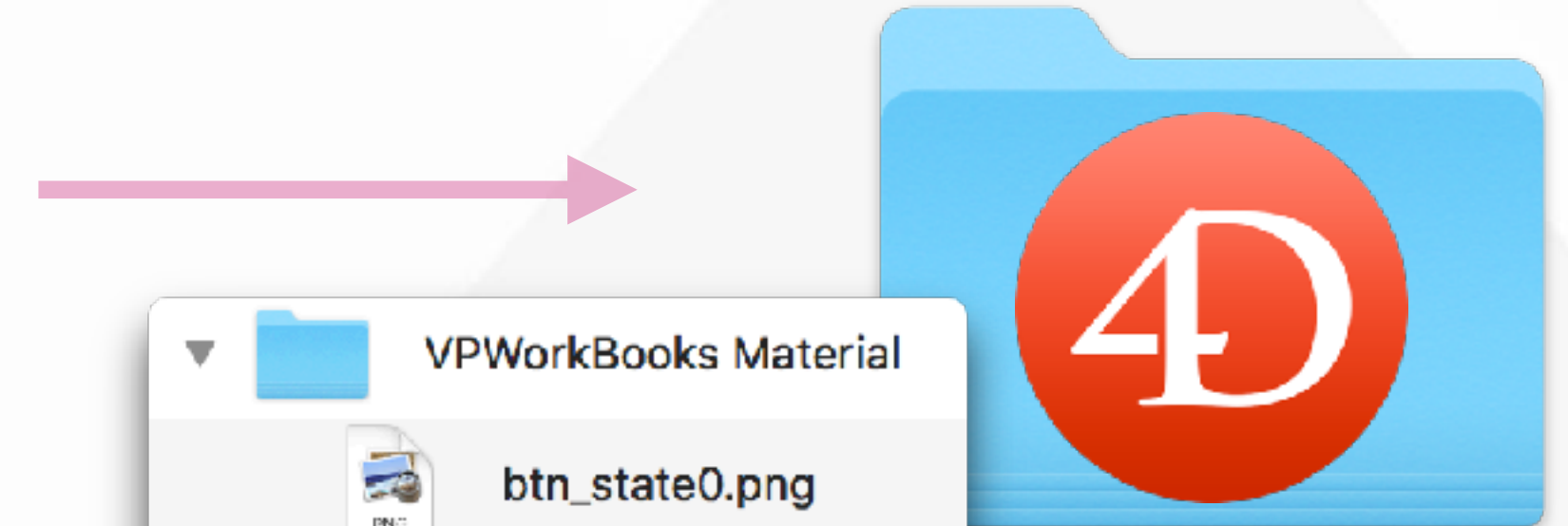
SF disabled, no stroke

577 Creation 22/01/2018 11:02 Auteur

Modif 22/01/2018 11:53 Auteur

442 Creation 22/01/2018 11:03 Auteur

Modif 22/01/2018 12:01 Auteur



VPWorkBooks Material

- btn_state0.png
- btn_state1.png
- btn_state2.png
- btn_state3.png
- icn_state0.png
- icn_state1.png
- icn_state2.png
- icn_state3.png



E



High level - popups Applications in real life... everywhere !

- proTools : HDI states
- Fyo : mails / emailing / newsletters
- Fyo : inscriptions

High level - popups

But... what is missing



**Filtres and searches,
add the « idle » state**

Personnes

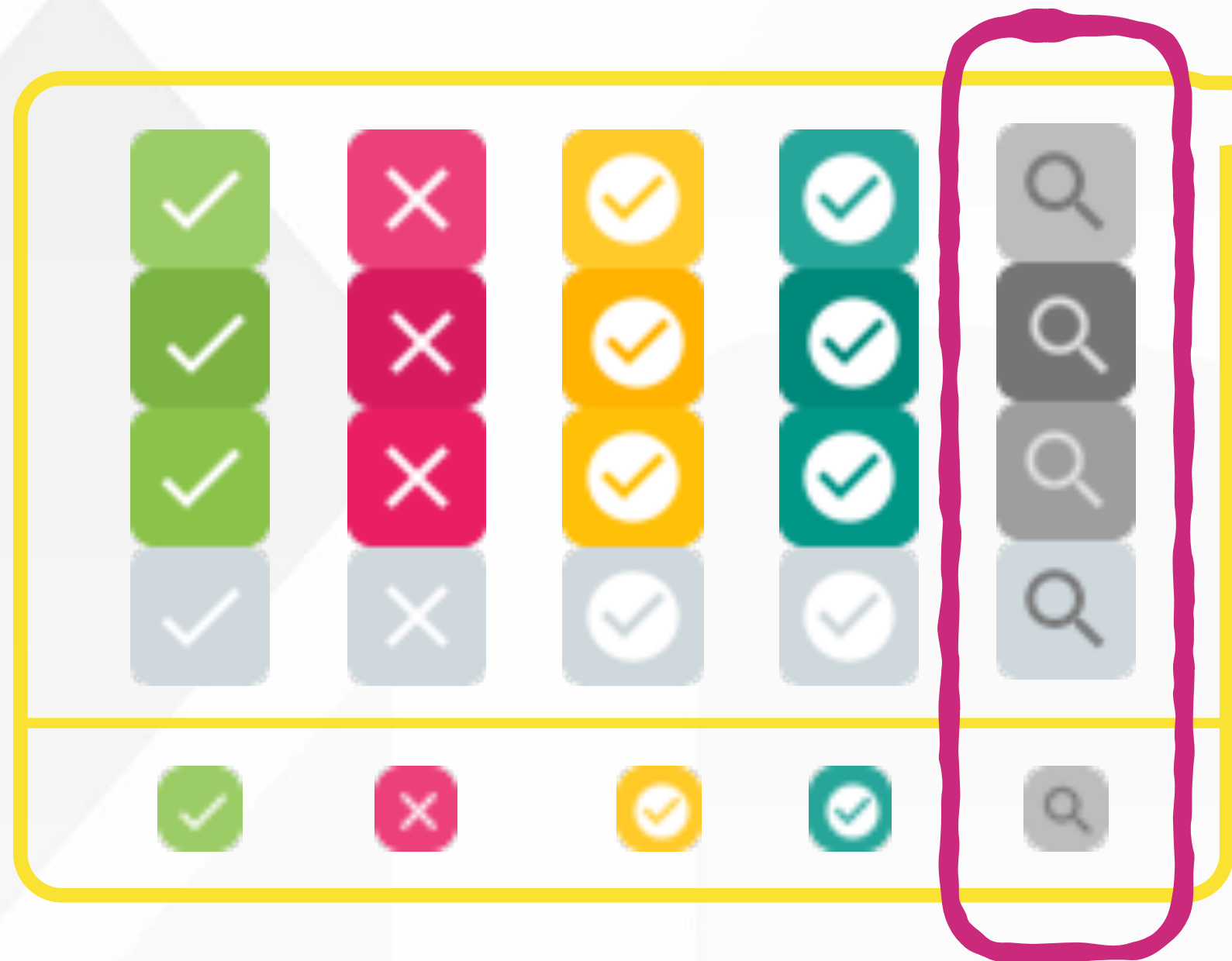
Présent PF A

⌵

✕

i States

- Ok
- Cancelled
- Not sure
- Reported
- Idle

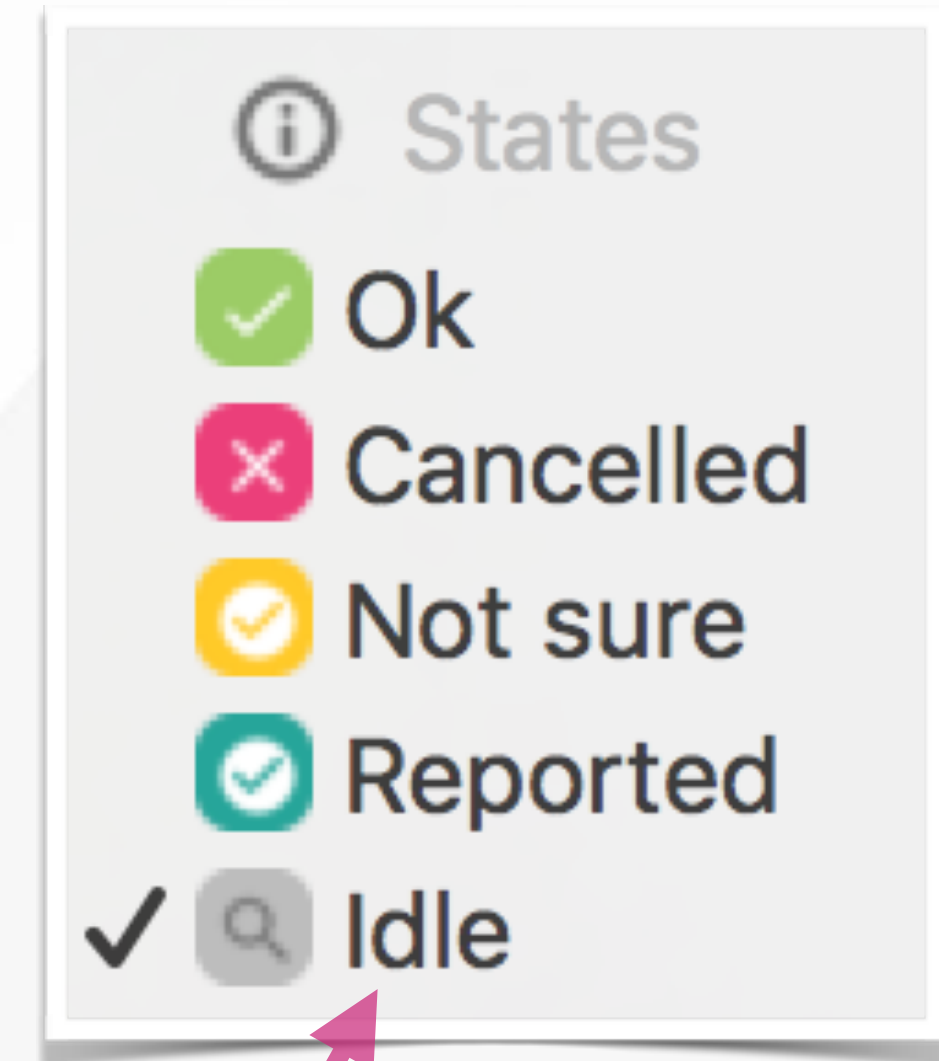


Materials

- btn_state0.png à btn_state3.png
- icn_state0.png à icn_state3.png

For « idle », add of...

- btn_state4.png
- icn_state4.png



```

C_TEXT($rscPath)
$rscPath:="VPWorkBooks"+Folder_separator+"icn_state"
C_LONGINT($var)
If (x_btnPopup_val (Form event; ->$var; Self; $rscPath; -><>T_states; "Idle"))
  F_WB_groutine ("FILTRE")
End if
  
```

Get value

```
C_LONGINT($state)
C_BOOLEAN($isState)
$isState:=x_btnPopup_filter(->$state;"btn_state";-><>T_states)
```

- States
- Ok
- Cancelled
- Not sure
- Reported
- Idle

Use value

```
If ($isActiveLine) & ($isState)
  $isActiveLine:=( $ptr_LB_state->{$line}=$state)
End if
```

See « *F_WB_groutine* »

F



Examples

- HDI : filtres
- Fyo : filtres
- proTools : component scales and gammes

Component



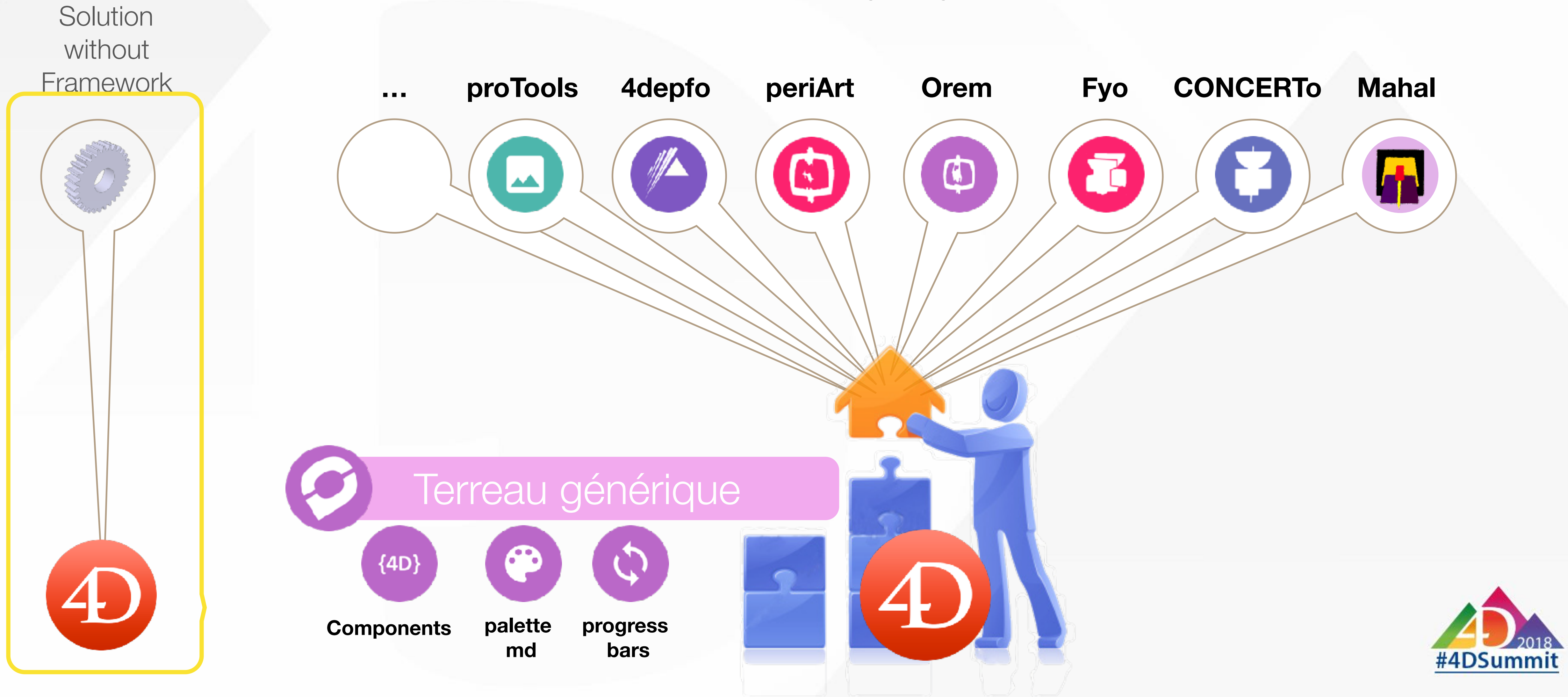
- What for?
- Multi instance widget
- Display SVG in...
- Material's generation, base 4D

Component

What for ?

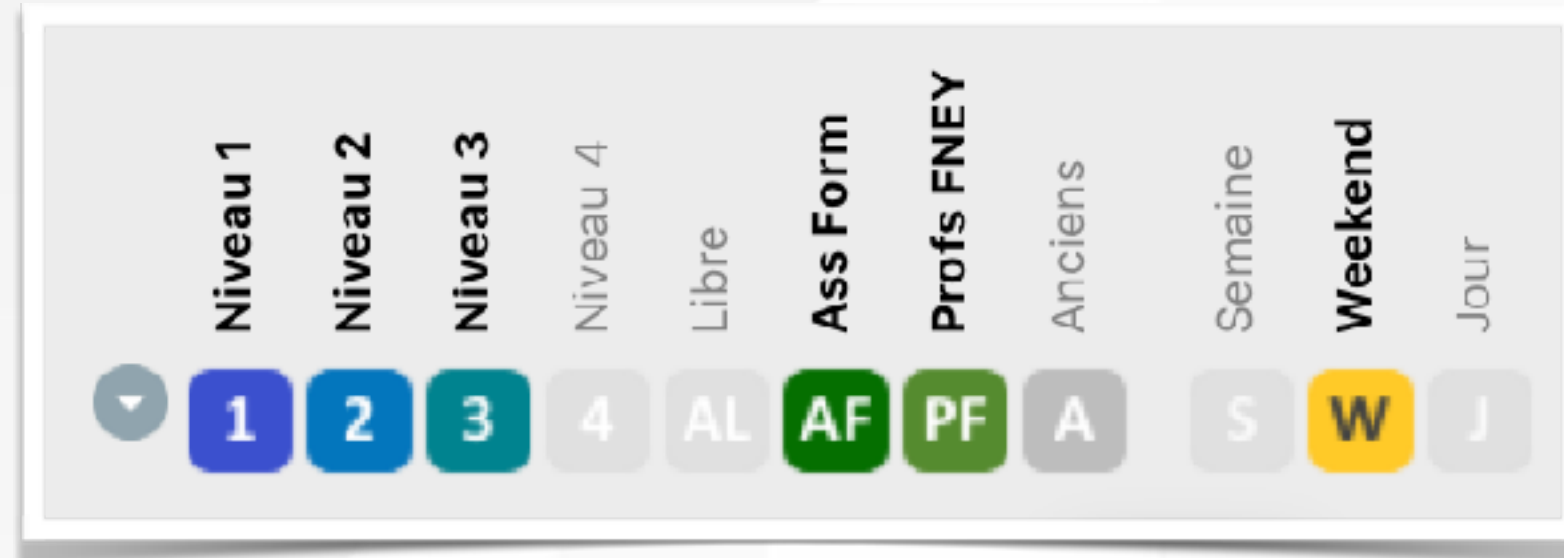
A framework is a coherent set of structural software components, which serves to create the foundation and model the application software architecture.
It is characterized by

- its generic character, weakly specialized.
- the framework that it imposes, guiding the software architecture.



Component for levels : Longint witch store 11 booleans

Widget



Case of

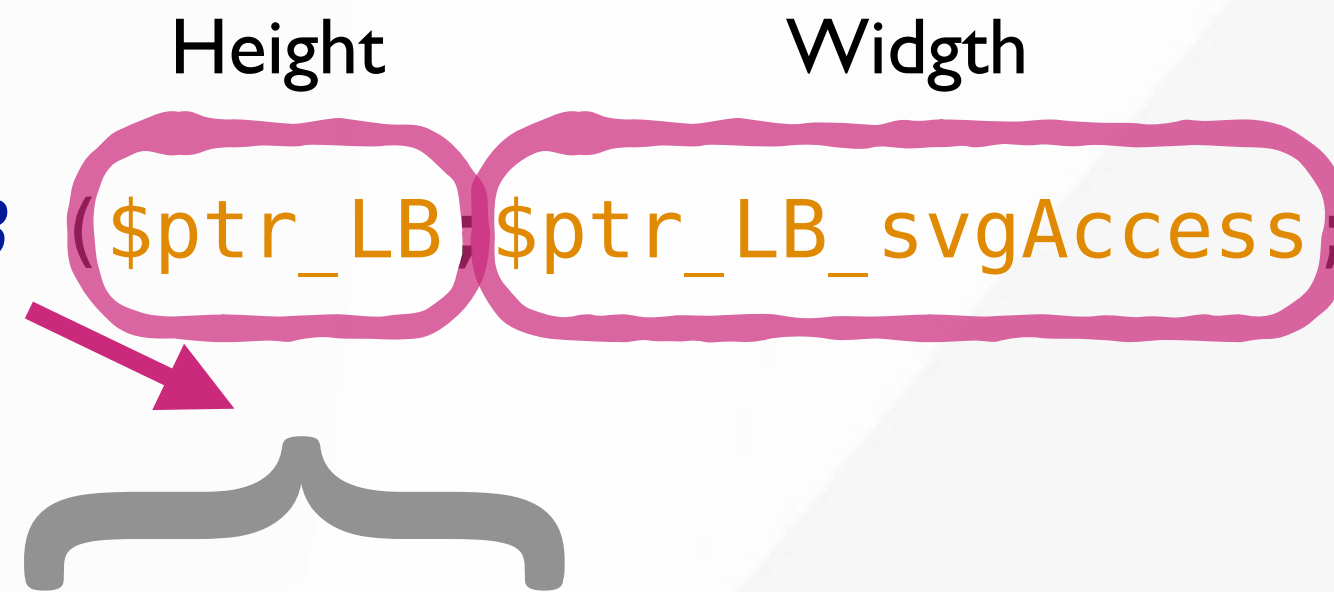
```
: (Form event=On_Load)  
fyo_accessSetValue ([VPWorkBooks]fyoAccess)  
fyo_accessSetReadWrite (x_isTableUnlocked (->[VPWorkBooks]))
```

```
: (Form event=On_Data_Change)  
[VPWorkBooks]fyoAccess :=fyo_accessGetValue
```

End case

SVG display

```
$ptr_LB_svgAccess ->{$line} :=fyo_access_svg_LB ($ptr_LB; $ptr_LB_svgAccess; [VPWorkBooks]fyoAccess)
```



alstonia	▲	1	2	3	4	AL	AF	PF	A	S	W	J	Frog	✓
altaian	▲	1	2	3	4	AL	AF	PF	A	S	W	J	Donkey	✗
althaein	▲	1	2	3	4	AL	AF	PF	A	S	W	J	Crab	✓
alular	▲	1	2	3	4	AL	AF	PF	A	S	W	J	Squire	✓
alulim	▲	1	2	3	4	AL	AF	PF	A	S	W	J	Titi	✓

Component

Multi-instances widget

fyο_accessInit

Case of

: (Form event=On_Load)

fyο_accessSetValue ([VPWorkBooks]fyοAccess)

fyο_accessSetReadWrite (x_isTableUnlocked (->[VPWorkBooks]))

Case of

: (Form event=On_Clicked)

[VPWorkBooks]fyοAccess := *fyο_accessGetValue*

	Niveau 1	Niveau 2	Niveau 3	Niveau 4	Libre	Ass Form	Profs FNEY	Anciens	Semaine	Weekend	Jour
▼	1	2	3	4	AL	AF	PF	A	S	W	J

Component

Display SVG in...

SVG display in listbox

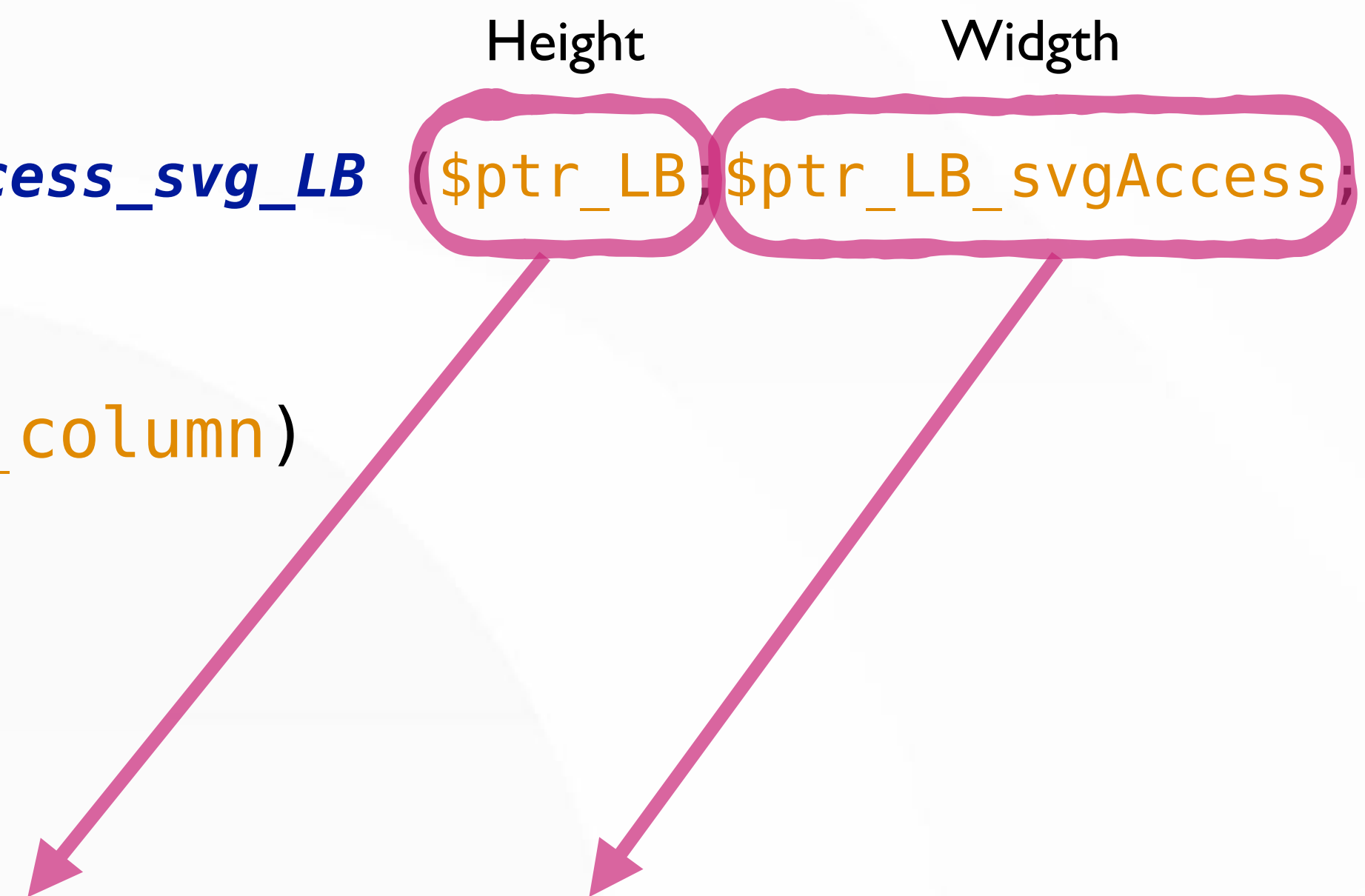
```
$ptr_LB_svgAccess->{$line}:=fyo_access_svg_LB ($ptr_LB,$ptr_LB_svgAccess,[VPWorkBooks]fyoAccess)
```

```
C_POINTER($ptr_LB;$ptr_LB_column)  
C_LONGINT($access)
```

```
$ptr_LB:=$1  
$ptr_LB_column:=$2  
$access:=$3
```

```
C_LONGINT($height;$width;$minWidth;$maxWidth)  
$height:=LISTBOX Get rows height($ptr_LB->;lk_pixels)  
$width:=LISTBOX Get column width($ptr_LB_column->;$minWidth;$maxWidth)+1
```

```
$0:=fyo_access_svg ($width;$height;$access)
```



alstonia	▲	1	2	3	4	AL	AF	PF	A	S	W	J	Frog	✓
altaian	▲	1	2	3	4	AL	AF	PF	A	S	W	J	Donkey	✗
althaein	▲	1	2	3	4	AL	AF	PF	A	S	W	J	Crab	✓
alular	▲	1	2	3	4	AL	AF	PF	A	S	W	J	Squire	✓
alulim	▲	1	2	3	4	AL	AF	PF	A	S	W	J	Titi	✓

SVG display in object

```
$ptr_obj -> := fyo_access_svg_object ( $ptr_obj ; [VPWorkBooks] fyoAccess )
```

Dim

```
C_POINTER($ptr_self)  
C_LONGINT($access)
```

```
$ptr_self := $1  
$access := $2
```

```
C_LONGINT($left;$top;$right;$bottom)  
OBJECT GET COORDINATES($ptr_self->;$left;$top;$right;$bottom)  
C_LONGINT($height;$width)  
$height := $bottom - $top  
$width := $right - $left
```

```
$0 := fyo_access_svg ($width;$height;$access)
```





Questions & Answers

<ftp://Summit2018:uokU8NY@ftp-support.4d.fr/>



NO

YES



	Niveau 1	Niveau 2	Niveau 3	Niveau 4	Libre	Ass Form	Profs FNEY	Anciens	Semaine	Weekend	Jour
	1	2	3	4	AL	AF	PF	A	S	W	J

State

- Ok
- Cancelled
- Not sure
- Reported



Questions & Answers

<ftp://Summit2018:uokU8NY@ftp-support.4d.fr/>



Network: Seine_guest1
Password: Techtech1



Your feedback is important to us!

Events.4d.com/agenda

Select the session and

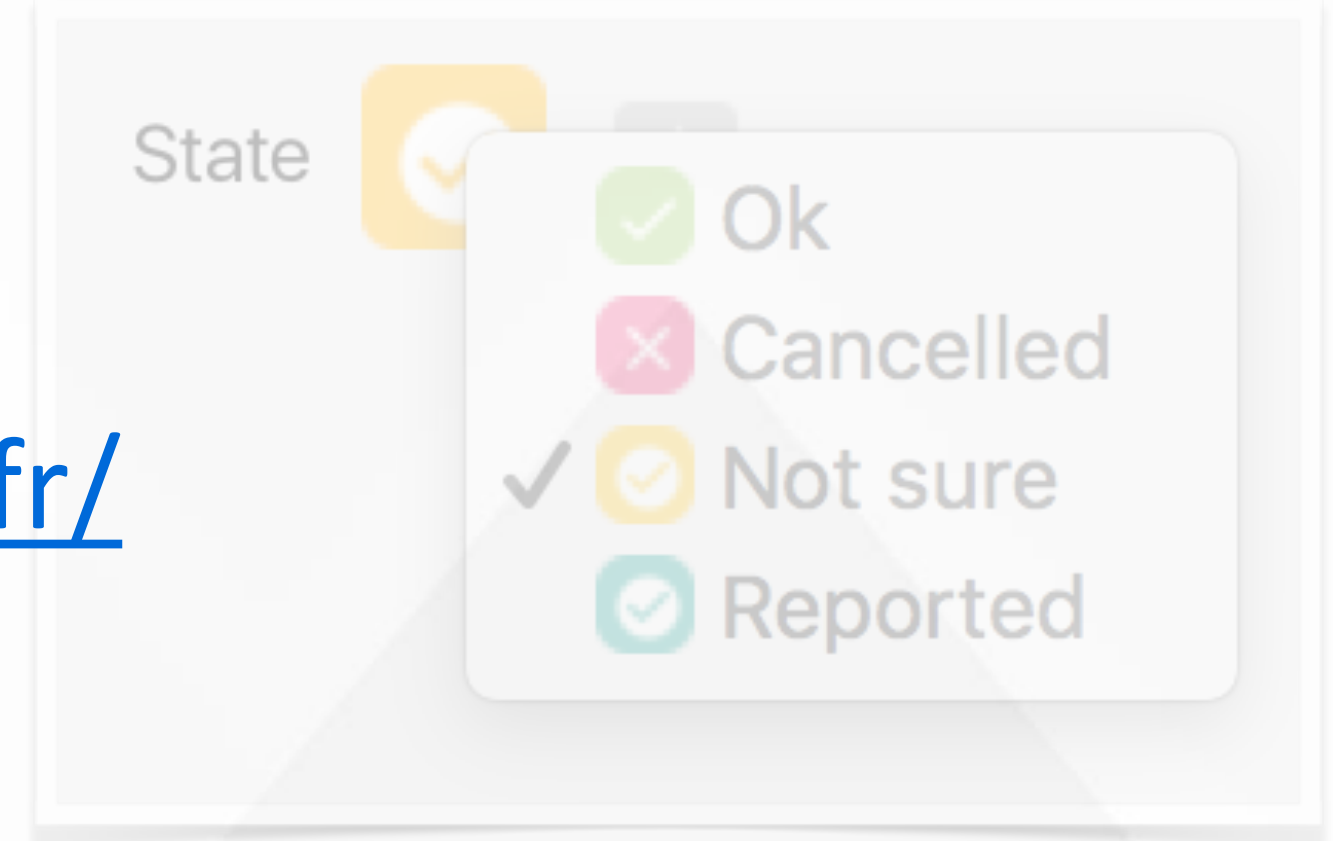
Give Feedback



Thanks

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