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How to create

a responsive design in FireMonkey

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Agenda

Why thinking “responsive design” in FireMonkey ?

Visual components in FireMonkey

Structure panel

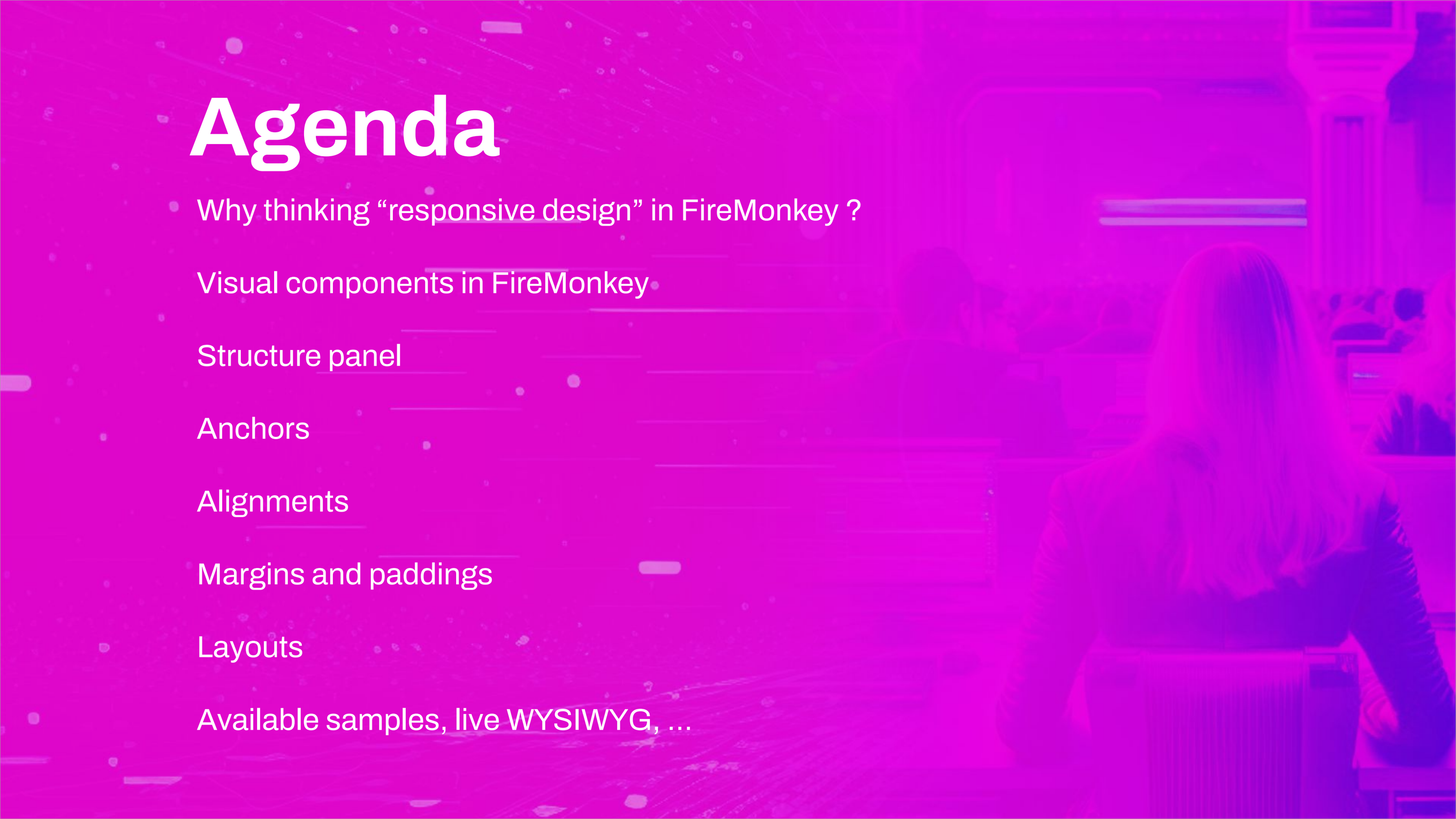
Anchors

Alignments

Margins and paddings

Layouts

Available samples, live WYSIWYG, ...



Foreword

This presentation is an update of my 2019 webinar available in French at https://serialstreameur.fr/webinaire-20190528.php

It's also available on YouTube with a VCL presentation. Just search "interface adaptive VCL" or "interface adaptive FireMonkey" to find an auto captioned replay there.

Samples and slides for this presentation are available (on GitHub) at https://vasur.fr/cb2023fmx

Why thinking “responsive design” in FireMonkey ?

Because we can code for mobile applications with a lot of screen resolutions and of course for desktop and tablets too.

Thinking “responsive design” like we do for web sites is a good idea for longer-lasting applications.

Look at https://www.devicespecifications.com to see a list of phones and tablets and their specifications. This will give you an idea of the scale of the work involved in designing pixel-based screens rather than responsive ones.

Visual components in FireMonkey

VCL and FireMonkey are globally equivalent in term of components properties but some things have changed :

- Text property instead of Caption (except for TForm)
- Position.(X/Y) as single instead of Top/Left as integer
- Width/Height as single (except for TForm)
- rotation (angle and center)
- opacity level
- scaling

- New components : animations, effects, shapes, ...

Structure panel

In FMX and VCL the components have an Owner property (for create/destroy) and a Parent property.

The structure panel shows us the tree of (non) visual components organized by parent / children.

Like in VCL a visual component is displayed in a parent area. With no parent, nothing will be displayed.

Unlike VCL, all FMX visual component can have children.

Anchors

Visual components have a position but can be anchored to their parent.

It works like in VCL.

An anchor impacts the position and the size of a visual component.

Alignments

FireMonkey provides us with a greater number of alignments than VCL to enable easier shaping.

Some of them, however, remain a mystery to me !

Margins and paddings

A margin is the space outside the component draw area. It's used when the components are aligned.

The padding is the space inside the component, reducing its aligned children draw area.

In VCL you need to activate AlignWithMargins property. In FireMonkey setting a margin or padding is enough.

Layouts

To group components and create complex designs we have some layouts and of course classics containers too like TPanel and ScrollBox.

Putting a layout in a layout in a layout in a layout is a good way to manage alignments and other things where and how you want.

Available samples

Screen and apps samples are available for Delphi and C++Builder in GetIt : search “app screen”.

Available samples

You'll find a lot of FireMonkey apps in Delphi and C++Builder samples.

An installer option also available on Embarcadero GitHub account : https://github.com/Embarcadero/RADStudio11Demos

Available samples

A lot of repositories on GitHub contains samples of code, apps, full projects to inspire and help Delphi developers to learn, progress and share programing knowledge.

Search “delphi-sample” topic on GitHub.com:
https://github.com/topics/delphi-sample

Look at my samples and list “OtherDelphiSampleRepositories.md”:
https://github.com/DeveloppeurPascal/Delphi-samples

Form editor is a WYSIWYG editor

The form editor allow us to see our design with the chosen style for each platform.

Form editor is a WYSIWYG editor

An instant preview is available in the IDE tools.

No need for a device to simulate the display on its screen size according to its operating system, just activate the device in the list or add one.

Form editor is a WYSIWYG editor

And you can see your screens live without compiling your programs, most of features work (except some database access, code and events).

Use FireUI App Preview from Samples / Tools folder and launch it on your devices on the same network you are for your development computer.

Authorize the IDE to share the form source and enjoy.
(it will use AppTethering components over IP to communicate)

Conclusion

FireMonkey components and designer are really powerful.

We can really do anything with it.

Give it a try on your next project !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