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Creating a solid user interface
(or, the new UI model is cool)

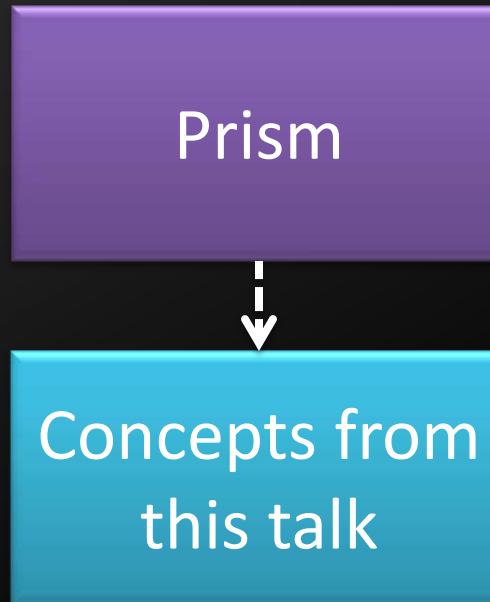


Context

- Modern *Windows* application development
 - ▶ so no Java, MFC, Visual Basic, Windows Forms
- Focus on the ideas that underpin WPF

!Agenda

- Prism is out of scope for this talk
 - ▶ covered tomorrow at 4pm if you're interested



Agenda

- Examination of core UI development issues
 - ▶ modern UI paradigms
 - ▶ Model <-> View <-> ViewModel pattern
 - ▶ presenting data
 - ▶ commanding in the UI
 - ▶ understanding threading in the UI
- Do we have the skills within the team?



Do we have the skills within the team?

- Developers rarely design quality UI
 - ▶ lack of experience in HCI
 - ▶ lack of time
- (Old) architects don't understand modern UI
 - ▶ "I learnt Windows programming with HWNDs"
 - ▶ "handle WM_PAINT to do owner draw"
- UX designer != graphic designer



Designer / developer workflows

Designer



Developer



Integration designer



Modern UI paradigms

- Numerous new ideas to consider
 - ▶ visual and logical UI structure
 - ▬ “lookless” controls
 - ▬ data templates
 - ▶ dependency properties
 - ▶ triggers and behaviours
- And some old ones revisited
 - ▶ styles, templates, declarative UI, routed events

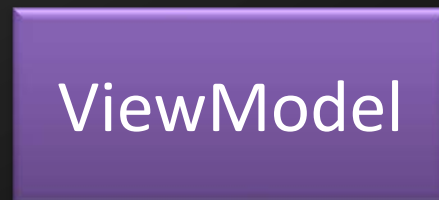


View <-> Model <-> ViewModel

- Prism tends to use V-M-VM pattern



Data-bound UI



Data-bound properties
Commands



Service calls
Data access

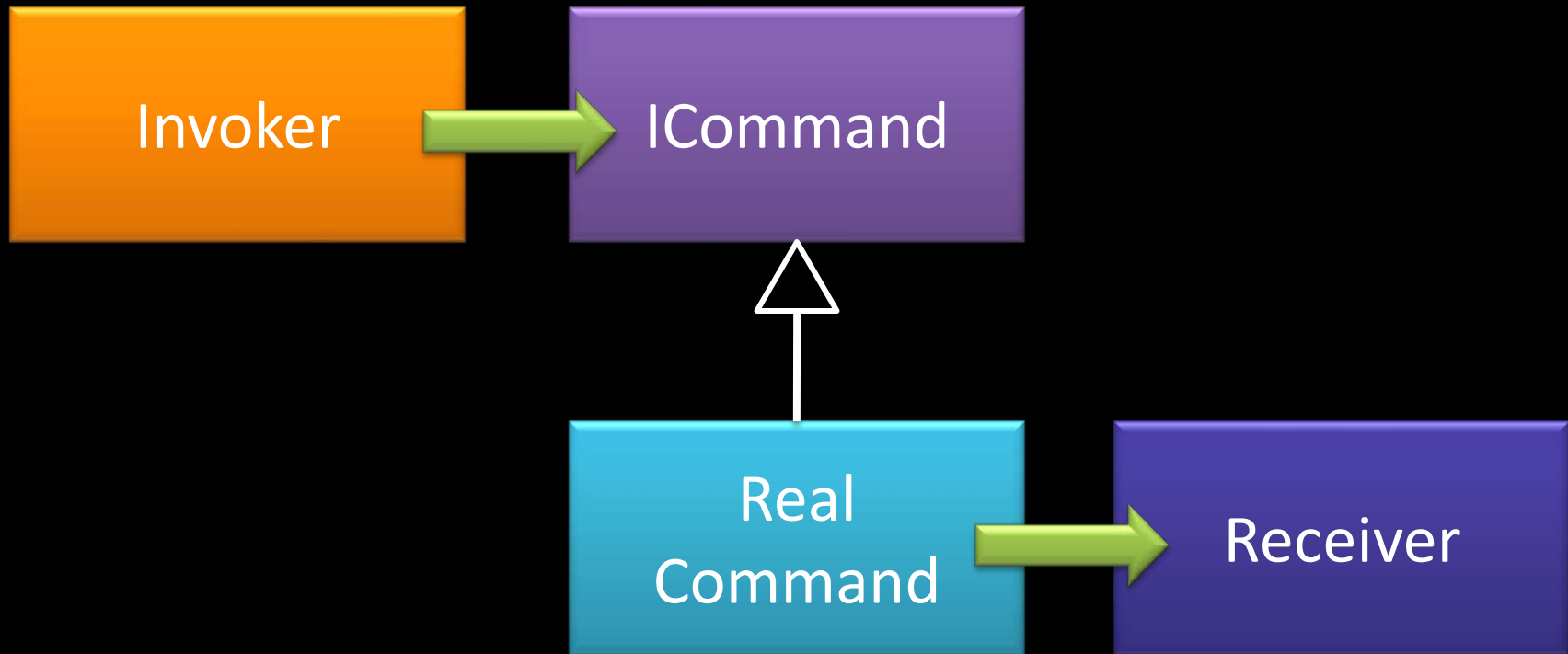


Data presentation

- Visualising data is the new UI skill
 - ▶ mapping an object to a visual representation
 - ▶ minimal developer code
 - ▶ maximum visual appearance



Commands



Threading in the UI

- WPF is highly sensitive to threads
 - ▶ legacy compatibility is key (clipboard, shell)
- Highly restrictive threading model
 - ▶ *View and ViewModel* should run on UI thread
 - ▶ model can do what it likes
 - ▶ ViewModel should manage the issue



Summary

- WPF / Silverlight is a modern discipline
- USER32/GDI model still useful to understand
 - ▶ largely replaced by better techniques
- Team skills are paramount to success
 - ▶ visual design + UI design + good code
- Understand the technologies



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Thanks for coming

Q & A