

ITdevCon

European Delphi Conference

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10 ways to have fun with App Tethering

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About the speaker

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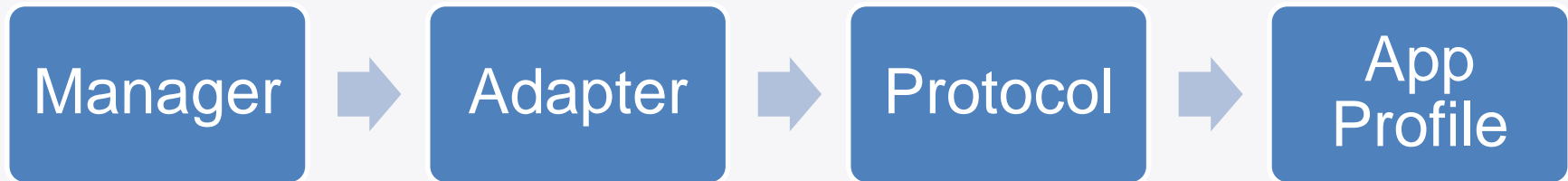
Agenda

- App Tethering in Delphi
- Architecture
- Pros and Cons
- Components
- Live Demos
- Other ideas
- Q&A

App Tethering in Delphi

“App Tethering” components give (desktop and mobile) applications the ability to interact with other applications in a peer to peer way, running on the same machine or a remote machine, on the same device or on a remote device.

Architecture



- **Manager:** discovers other applications using *App Tethering* on the same machine or device
- **Adapter:** represents the «media» which deliver messages between apps connected through *App Tethering* (Network, Bluetooth, ...)
- **Protocol:** it's the format used for sending and receiving data through *App Tethering* (UDP, TCP, ...)
- **App Profile:** declares actions and resources shared or mirrored (borrowed) by an application using *App Tethering*

Pros

- **Easy to use:** just a couple of components and (almost) zero configuration
- **Peer to peer:** implements a «peer to peer» connection, difficult scenario to do from scratch (using Indy or other libraries)
- **Full RAD support:** you can create remotely invokable action without writing any code
- **Versatile:** you can easily switch adapters (from Network to Bluetooth, or... whatever adapter will be available in the future)
- **Cross platform:** available for all platforms, and in both VCL and FireMonkey libraries

Cons

- **Limited configuration:** developer has little control on socket ports or channels since App Tethering handles it
- **Not scalable:** you cannot add many devices and/or share huge amount of data without severe impacts
- **Not client/server:** not suitable for scenarios where a «central point» is required (for user management, authentication, authorization, logging, shared services, ...)
- **Low reliability:** some data may be missed due to adapters and connections

Components

TTetheringManager

- Lets you choose adapter and protocol
- Manages the connections with other tethering managers
- Gives access to app profiles

TTetheringAppProfile

- Defines the resource set to share
- Defines the actions remotely invocable
- Declares resources and actions available in connected apps to be mirrored
- Triggers event when resources are received or updated

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Demos

Let's see some demo...

Demo

- **PowerPoint Automation:** open a PowerPoint document on your desktop and control it using your mobile device
- **Chat On The Fly:** exchange messages using a crossplatform client without a central server, then close and forget everything
- **Piggery:** play a «pig» sound effect remotely to make jokes 😊
- **Barcode:** scan a barcode calling an external application on your smartphone and send it to a connected business client
- **ShoutBoard:** insert a text and choose a background color to display a message on your phone or (better) tablet for your co-workers around you in the office or elsewhere

Other ideas

You could even...

- ...capture a photo with your phone and send it directly to a desktop application
- ...deploy an app to two or more mobile devices and use them as a controller for your desktop multiplayer game
- ...record a voice message and send it to one or more connected apps creating a «walkie-talkie system»
- ...create a remote controller for you favourite media player
- ...create a bridge to forward messages from network to Bluetooth (or viceversa)
- ...send any sensor information (accelerometer data, GPS position, lux level, pressure data) from your phone to your desktop

...and everything else that comes into your mind!

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Q & A

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Thanks!

