



Building Systems with REST

Glenn Block – Microsoft (the less and less evil empire)

HTTP is not RPC

"People often mistakenly refer to HTTP as a remote procedure call (RPC) [23] mechanism simply because it involves requests and responses. **What distinguishes RPC from other forms of**

network...

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serv...

Intermediaries

Wha...

gained...

mechanisms were not usable for the Web. **What makes HTTP significantly different from RPC**

is that the requests are directed to resources using a generic interface with standard

semantics that can be interpreted by intermediaries almost as well as by the machines

that originate services. The result is an application that allows for layers of transformation and

indirection that are independent of the information origin, which is very useful for an Internet-

scale, multi-organization, anarchically scalable information system. RPC mechanisms, in

contrast, are defined in terms of language APIs, not network-based applications."

HTTP is not a transport protocol

HTTP is not designed to be a transport protocol. It is a transfer protocol in which the messages reflect the semantics of the Web architecture by performing actions on

resources. It is possible to use HTTP as a transport protocol, but this is not the intended use. It is possible to use HTTP as a transport protocol, but this is not the intended use.

That is, the basic principle of decoupling is to separate the application logic from the transport logic. This is achieved by using a network-based API to services which can be understood by agents and intermediaries without any knowledge of the application.

Decoupling

of HTTP, since the only thing HTTP accomplishes in that situation is to add overhead from a legacy syntax. **A true application of HTTP maps the protocol user's actions to something that can be expressed using HTTP semantics, thus creating a network-based API to services which can be understood by agents and intermediaries without any knowledge of the application.**

REST,
HTTP done right





ممنوع التخزين أثناء إقلاع الطائرة والإقلاع والهبوط
NO STORAGE FOR TAKE OFF AND LANDING

WCF Web Apis HTTP IS First Class

First
Wardro

Reach any client

Browser

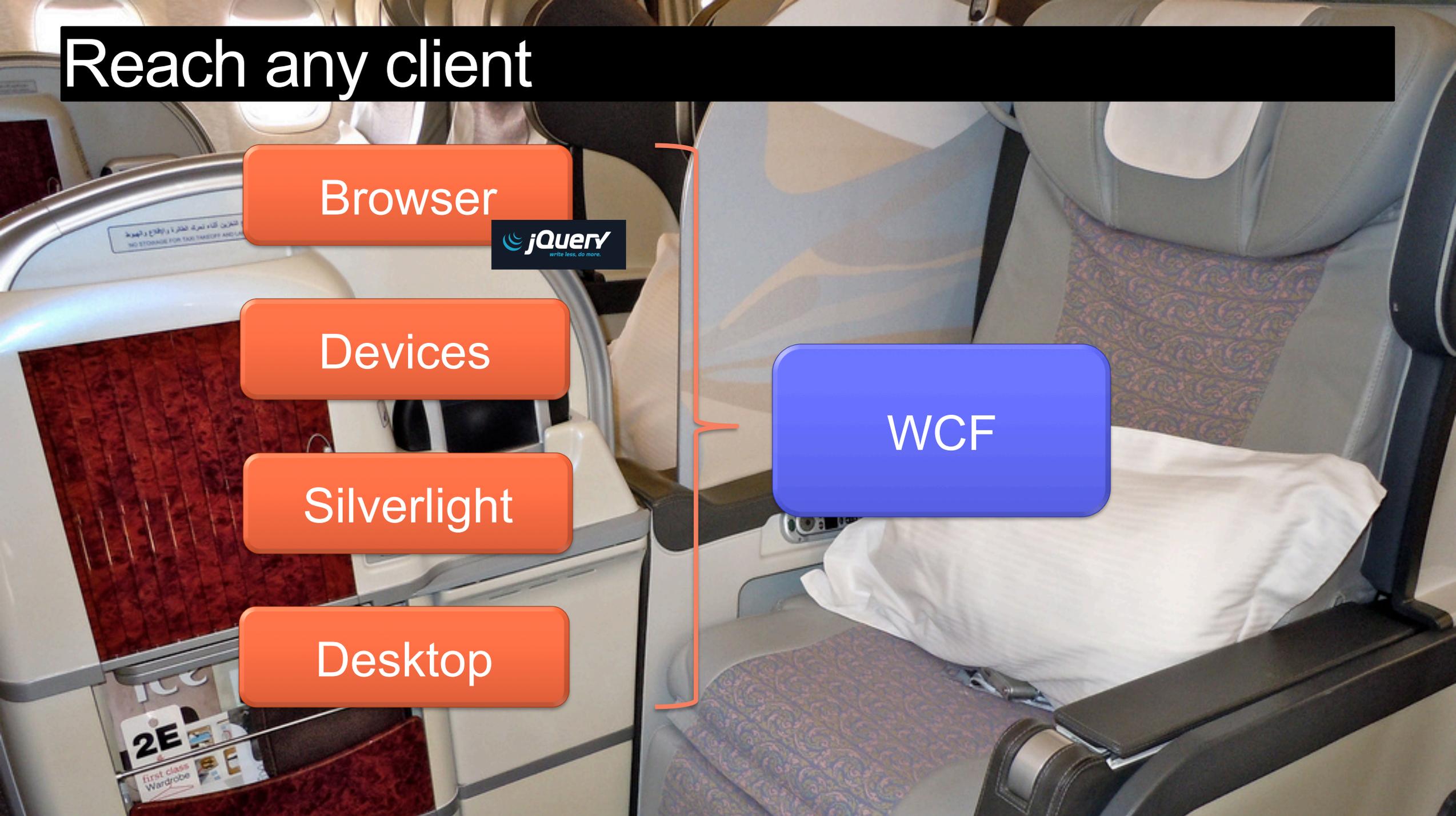


Devices

Silverlight

Desktop

WCF



Code is easier to maintain

Separation
of concerns

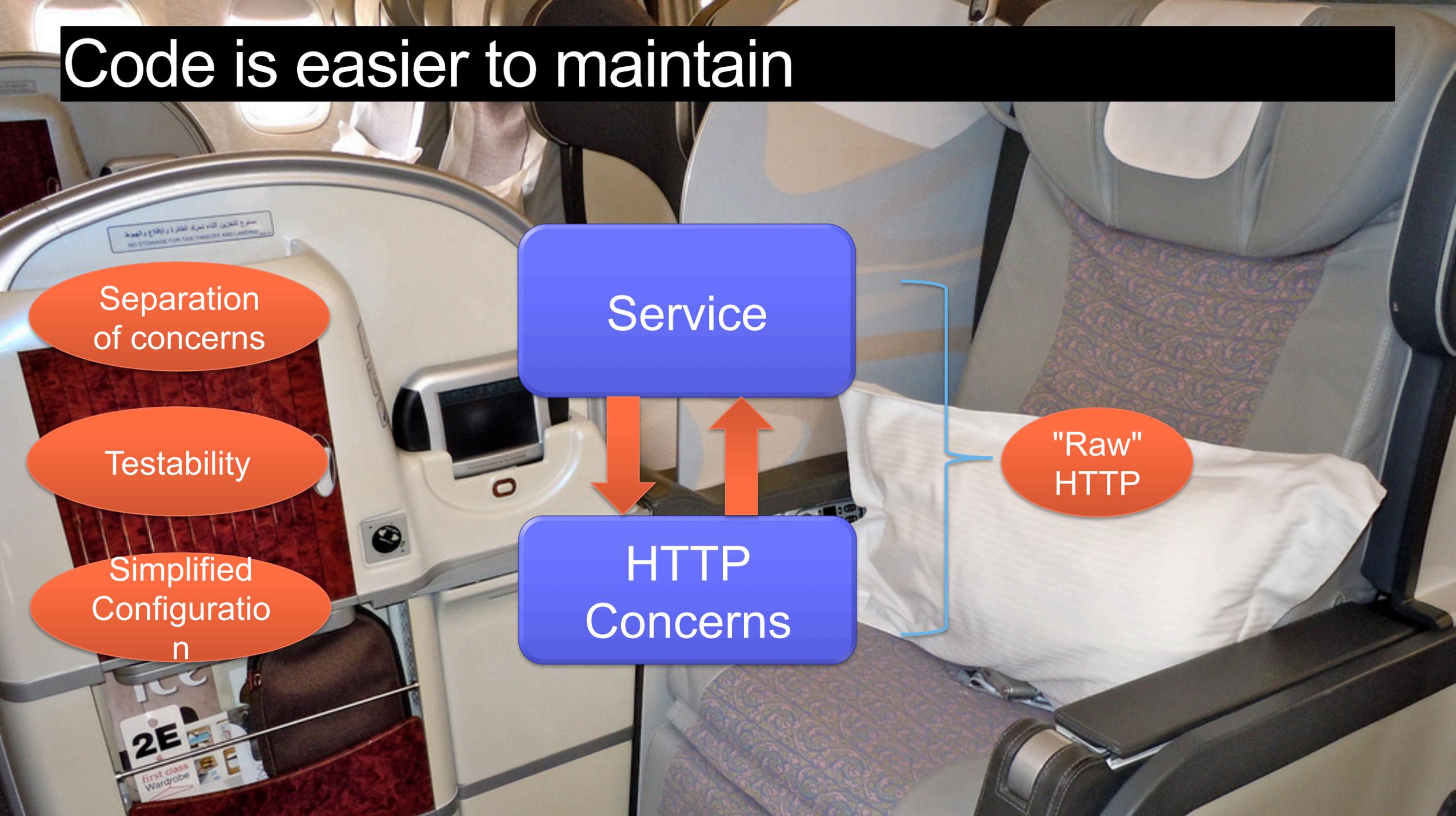
Testability

Simplified
Configuratio
n

Service

HTTP
Concerns

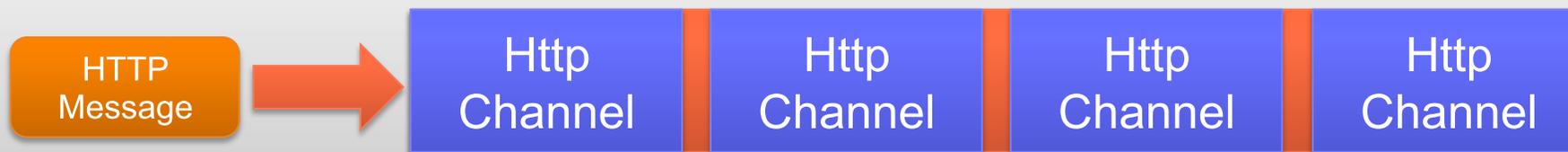
"Raw"
HTTP



Separating out HTTP and other concerns



Application concerns / CLR Objects



Low Level HTTP specific concerns / HTTP Only

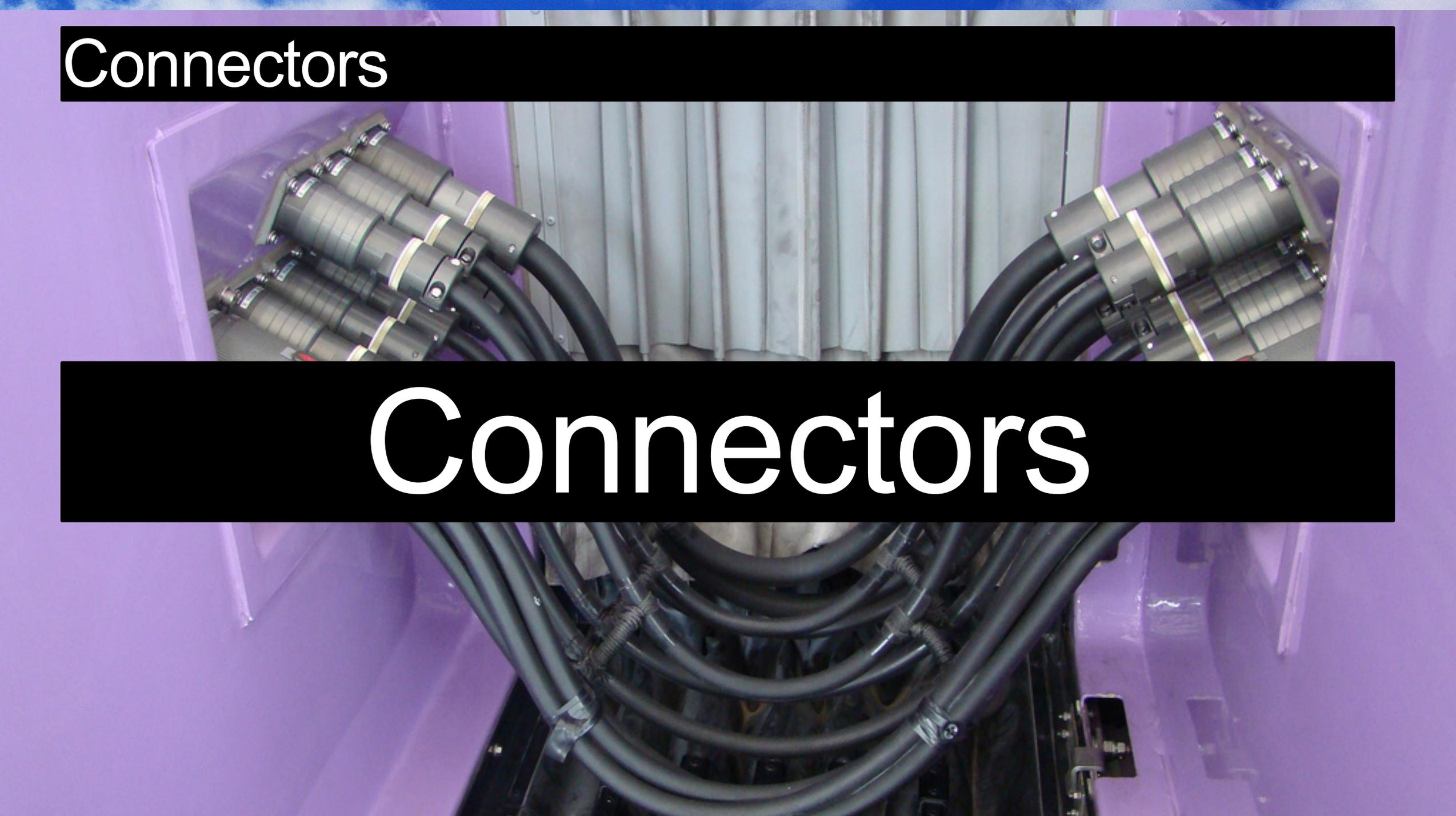


Resources

A close-up photograph of two hands shaking in a firm grip. The hand on the left is darker-skinned, and the hand on the right is lighter-skinned. Both hands are wearing dark suit jackets with white cuffs visible. The background is dark and out of focus.

Conneg

Connectors



Connectors



Intermediaries



Where do you

want to go today?

Hypermedia

Where to find out more WCF

WCF.Codeplex.com

email: gblock@microsoft.com

Twitter: [gblock](https://twitter.com/gblock) (at your own risk)

Where to find out more about REST

<http://tinyurl.com/therealrest>

Read: Rest in Practice