

Microservices and Media: Are We There Yet?

Chris Lennon, MediAnswers



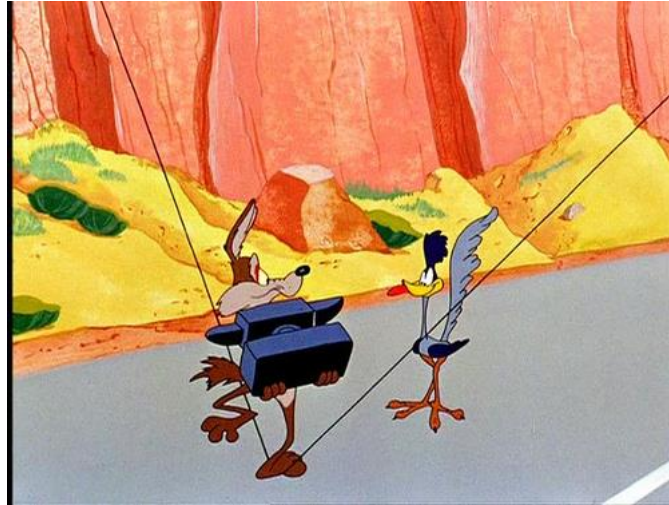
Why Do I Care?

- Interoperability is critical
- Involvement in cloud migration projects





“It’s no longer the big beating the small, but the fast beating the slow.” — Eric Pearson,
CIO, InterContinental Hotels Group



Microservices: Promise vs Reality

- What do organizations want?
 - Cloud native
 - Plug and play
 - Work together
 - Work across platforms



Microservices: Promise vs Reality

- What do vendors want?
 - Discoverability
 - New clients
 - New markets



There is no silver bullet

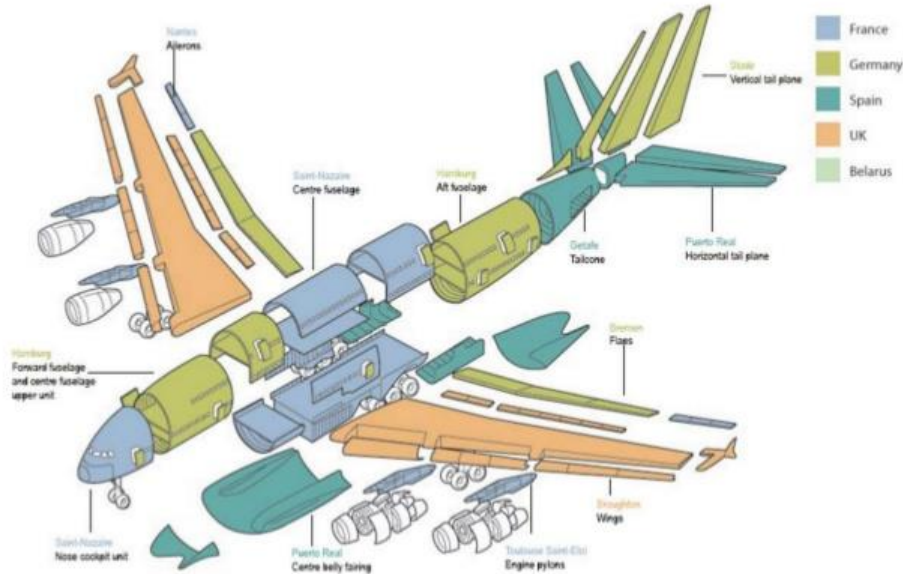


- **Reality is very different from ideal portrayals**

Advertisement versus reality



What is a microservice



- *“Loosely coupled service oriented architecture with bounded contexts” - Adrian Cockcroft*

A Microservice is simple – MicroService Architecture is complex



- Thousands of teams
- × Microservice architecture
- × Continuous delivery
- × Multiple environments

= 50 million deployments a year

Microservices require maturity

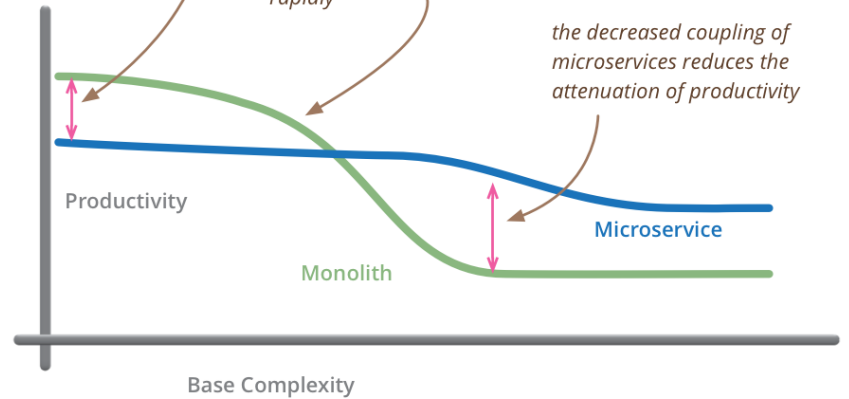
- Don't even consider microservices unless you have a system that's too complex to manage as a monolith



for less-complex systems, the extra baggage required to manage microservices reduces productivity

as complexity kicks in, productivity starts falling rapidly

the decreased coupling of microservices reduces the attenuation of productivity



but remember the skill of the team will outweigh any monolith/microservice choice

Microservice Problems – The Fallacy of Distributed Computing

1 The network is reliable.	2 Latency is zero.	3 Bandwidth is infinite.	4 The network is secure.
5 Topology doesn't change.	6 There is one administrator.	7 Transport cost is zero.	8 The network is homogeneous.

You're not loosely coupled



David Brady

@dbrady

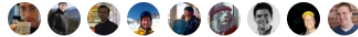
Follow



If 1 service dies and your whole system breaks, you don't have SOA. You have a monolith whose brain has been chopped up and stuck in jars.

9:15 AM - 26 Mar 2015

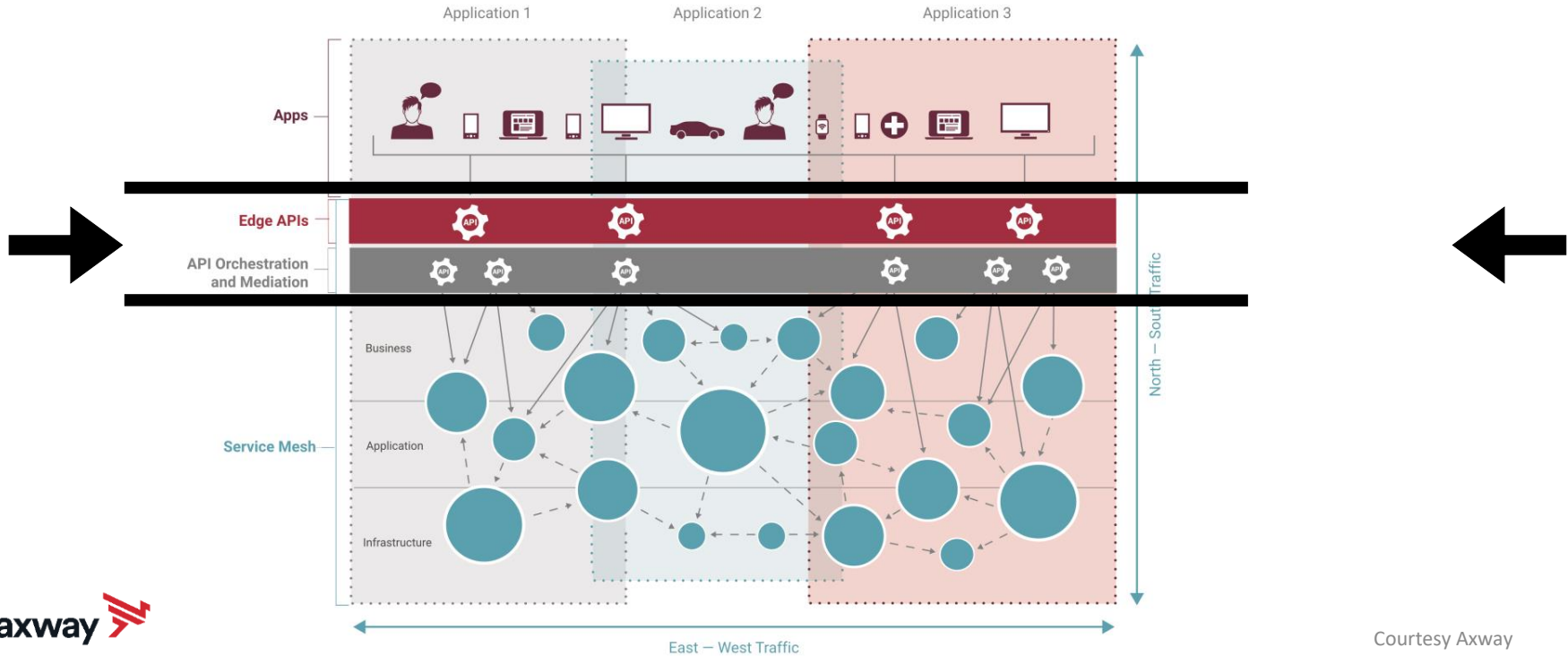
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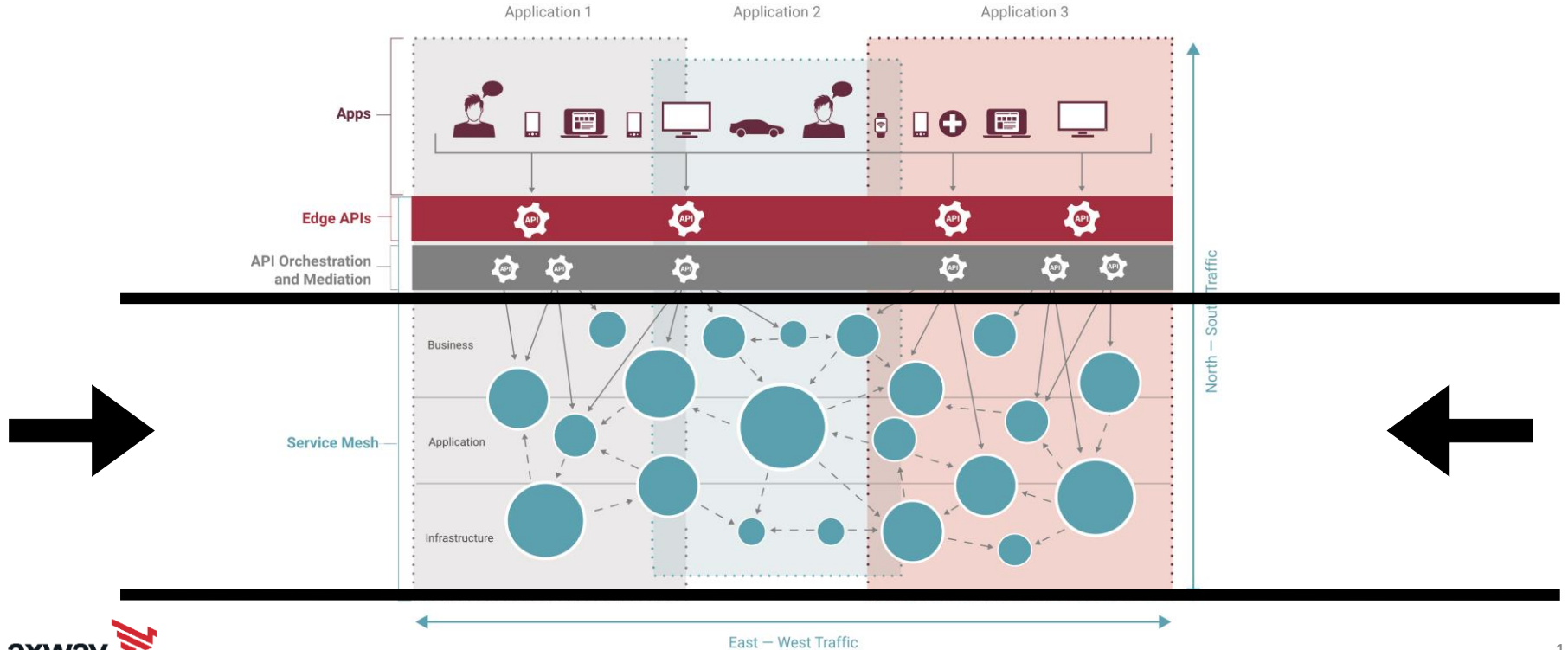
Microservice Problems – Visibility



In a monolithic world, most APIs are found here



However with microservices, most APIs are found here



The Big Challenge

- Interoperability

Monolithic App + Single API

Vs

Microservices and many points of potential
integration

SMPTE's Efforts

- Drafting Group work took place during much of 2018
- Four initial docs drafted

What have we done so far?

- Basic Terms and Definitions
 - Agreement here is fundamental to interoperability
- Overall Architecture
 - What do we mean by “microservices”?
 - General introduction to the topic

What have we done so far?

- Architectural Requirements
 - Granularity
 - Authentication/Security
 - Infrastructure
 - Discovery
 - Resource Management
 - Versioning
 - Error/Exception Handling

Not In Scope

- Inventing new microservices
- Standardizing anything beyond the bare minimum needed for interop
- Going down rabbit holes involving specific use/edge cases (yet)
- Items that don't have broad application

The Pause That Refreshes

- Group went on a hiatus in order to re-focus on real-world obstacles to microservice interoperability, and recruit additional members



Summit Meetings – May 2019



Summit Outcomes

- **Defining a common taxonomy**
 - – this is critical to interoperability – if we can't agree on this, we have challenges
 -
- **Terms & Definitions**
 - – similar to taxonomy, but subtly different. We must agree on basic definitions of applicable terms. We have made a decent start at this already.
 -
- **Resource management**
 - a popular choice, but perhaps not the simplest place to start.

Summit Outcomes

Decomposition of services

– agreeing on how to decompose services in a consistent way is fundamental to interoperability

Orchestration of services

– what is needed in common among services to enable standardized orchestration of them to form useful capabilities made up of multiple microservices?

Security

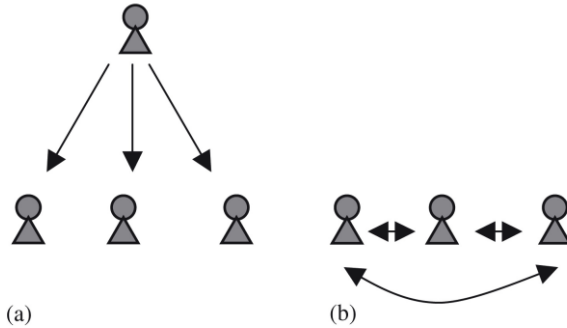
– critically important, but probably not that easy

Discovery mechanisms

– this seemed attractive to a wide array of participants. Having services easily discoverable in a standardized way helps everyone.

Interoperability

- Between vendors and across platforms



Quick Wins?

- IMF-related Services
- Advertising-related Services



Next Steps

- Re-launching group soon
- Inputs from participants
- Assignments of responsibilities



Tools at our disposal

- Standards
- Recommended Practices
- Engineering Guidelines
- Technical Specifications
- Industry Education
- Etc.

Thank You

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