

Designing Services for Mobile Apps

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A collage of various mobile devices including smartphones, tablets, and laptops scattered on a wooden desk. The devices are overlapping and arranged in a chaotic manner, suggesting a focus on mobile technology. The background is a light-colored wooden surface.

**We're Going
Mobile!!!**

What is Mobile?

- ▶ Phones

What is Mobile?

- ▶ Phones
- ▶ Tablets

What is Mobile?

- ▶ Phones
- ▶ Tablets
- ▶ Laptops

What is Mobile?

- ▶ Phones
- ▶ Tablets
- ▶ Laptops
- ▶ Websites

What is Mobile?

- ▶ Phones
- ▶ Tablets
- ▶ Laptops
- ▶ Websites
- ▶ Watches

What is Mobile?

- ▶ Phones
- ▶ Tablets
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- ▶ Websites
- ▶ Watches
- ▶ IoT

Things We Know & Don't Know...

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- ▶ Current Systems are complex

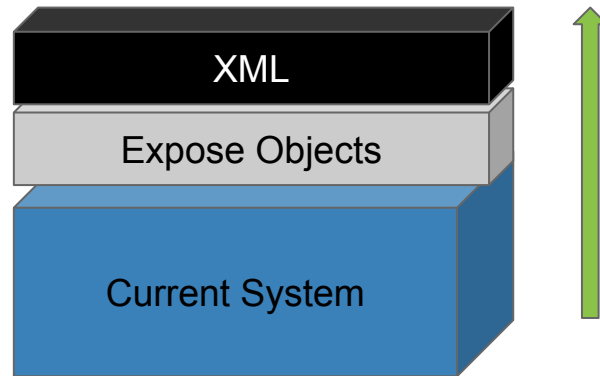
Things We Know & Don't Know...

- ▶ Current Systems are complex
- ▶ We have to be secure...right?

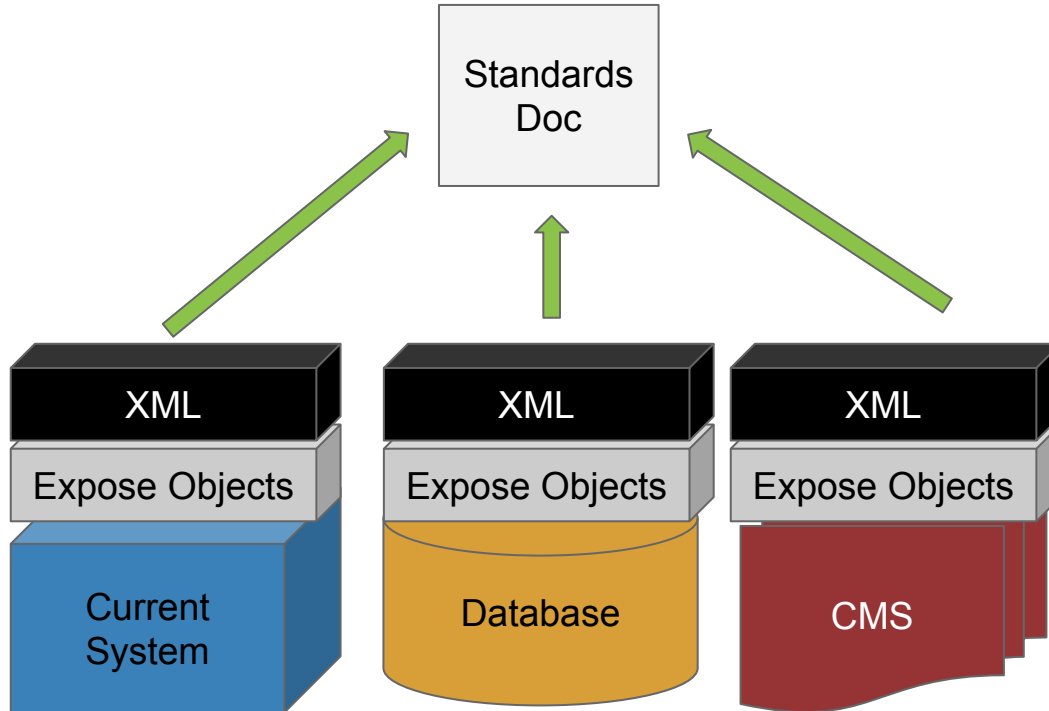
Things We Know & Don't Know...

- ▶ Current Systems are complex
- ▶ We have to be secure...right?
- ▶ What technology do we use? Does it Matter?

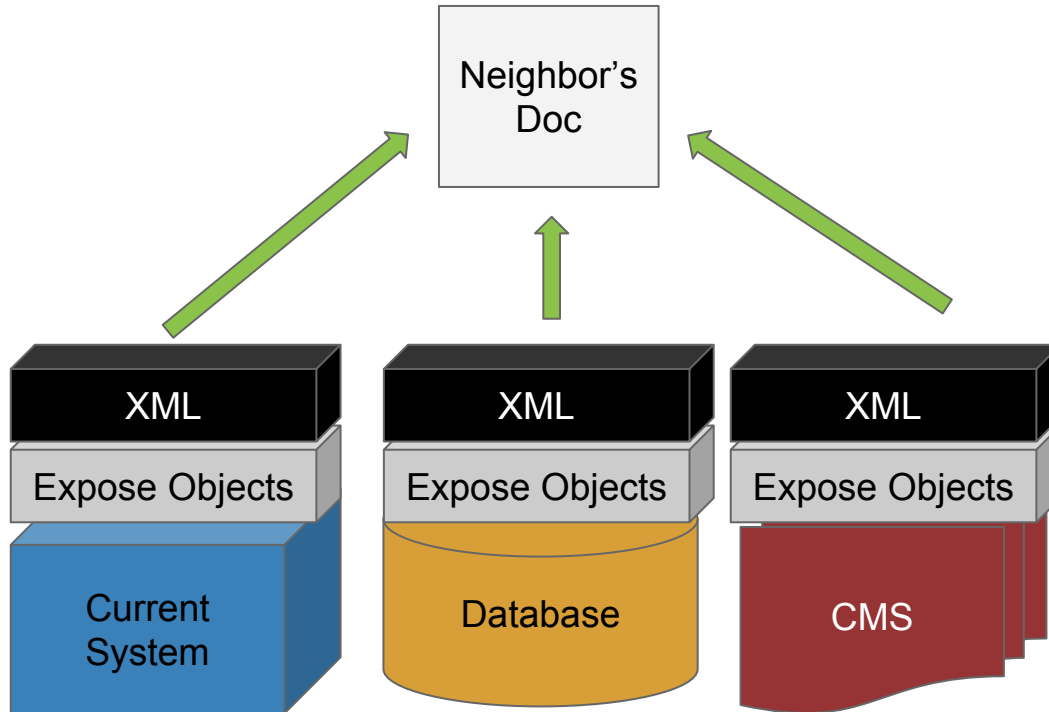
Build Up Approach



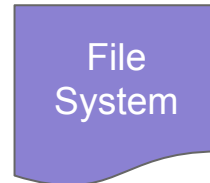
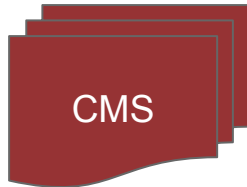
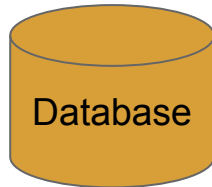
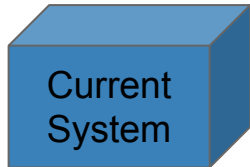
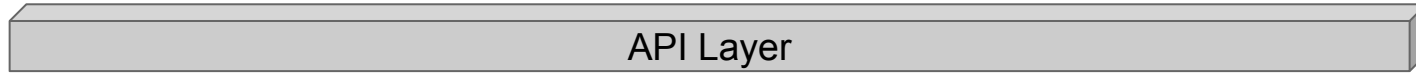
Standards Committee Approach



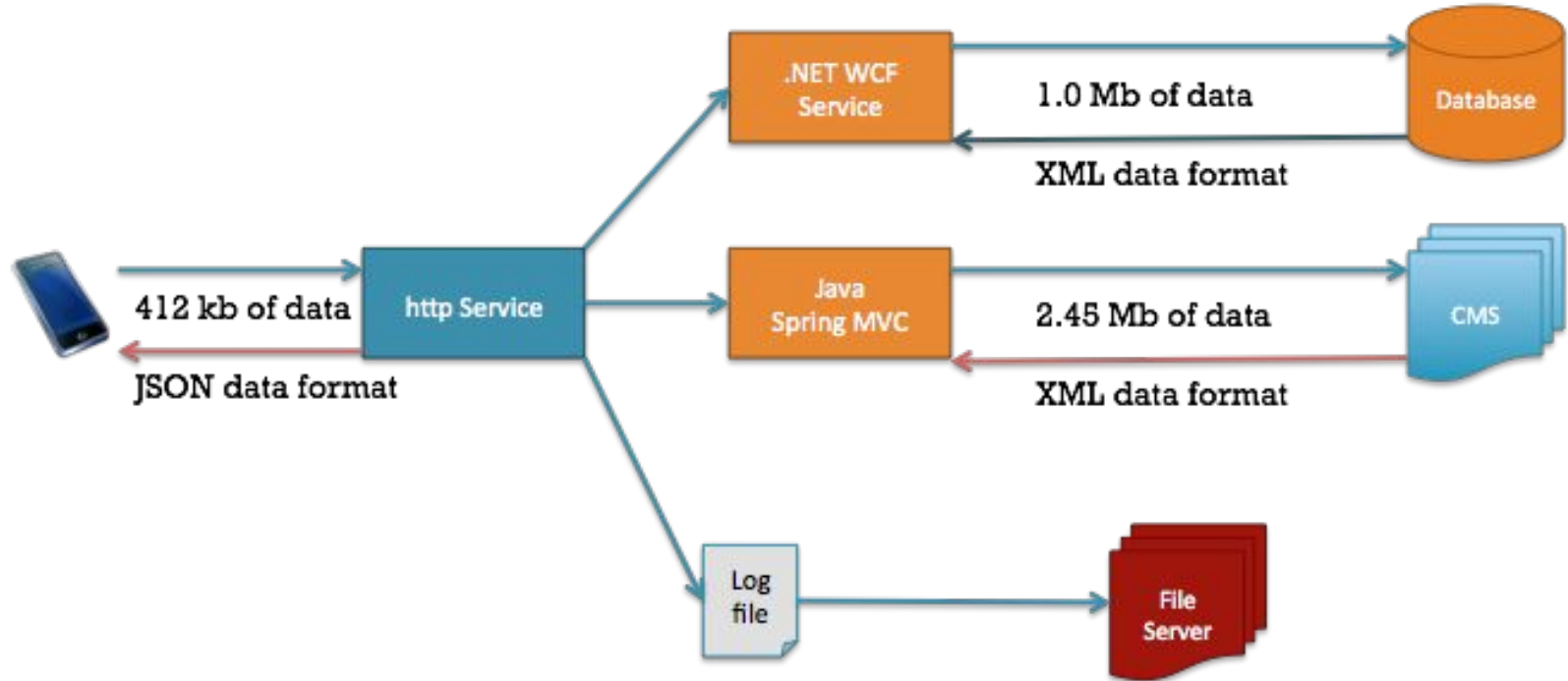
Borrow Thy Neighbor's Design



API Design



API Service Layer Example



API Design

XML (465 kb)

```
<GetPeopleResult xmlns:a="http://schemas.datacontract.
org/2004/07/NodeSVC" xmlns:i="http://www.w3.
org/2001/XMLSchema-instance">
  <a:Person>
    <a:Address i:nil="true" />
    <a:DateOfBirth>1953-04-21T00:00:00</a:DateOfBirth>
    <a:First>Shayne</a:First>
    <a:Id>1</a:Id>
    <a:Last>Boyer</a:Last>
    <a:Phone>111-222-1234</a:Phone>
    <a:Vehicle>
      <a:Make>Dodge</a:Make>
      <a:Model>Charger</a:Model>
      <a:Year>2013</a:Year>
    </a:Vehicle>
  </a:Person>
</GetPeopleResult>
```

JSON (207 kb)

```
"Person": [
  {
    "Address": {
      "attributes": {
        "i:nil": "true"
      }
    },
    "DateOfBirth": "1953-04-21T00:00:00",
    "First": "Shayne",
    "Id": "1",
    "Last": "Boyer",
    "Phone": "111-222-1234",
    "Vehicle": {
      "Make": "Dodge",
      "Model": "Charger",
      "Year": "2013"
    }
  }
]
```

What Technology Do I Use?

- ▶ node.js - express, restify, hapi
- ▶ ASP.NET Web API / ASP.NET 5
- ▶ Java Spring MVC
- ▶ PHP

What About Security?

- ▶ SSL / HTTPS
- ▶ IPSec
- ▶ OAuth 1.0 / 2.0
- ▶ Hardware



CODE TIME!

Thanks!

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