Service Oriented Architecture

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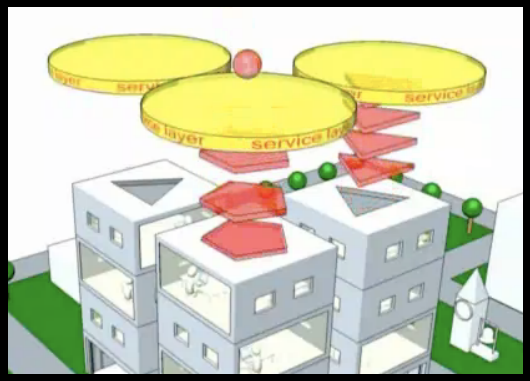
Service Oriented...

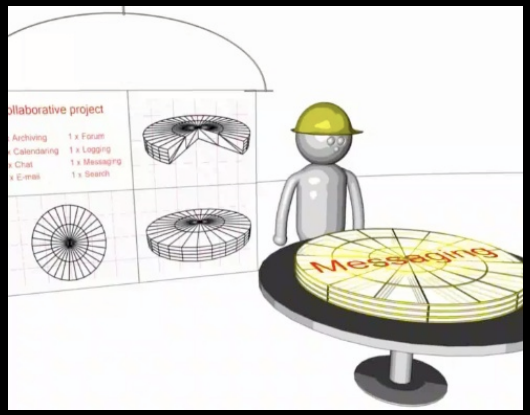
- Service Oriented Application - How to build one large and complex application
- Service Oriented Architecture - Find shared software and data and build services
- Enterprise Service Oriented Architecture - Systematic move toward services across an Enterprise (or larger)

http://en.wikipedia.org/wiki/Service-oriented_architecture

JISC e-Framework

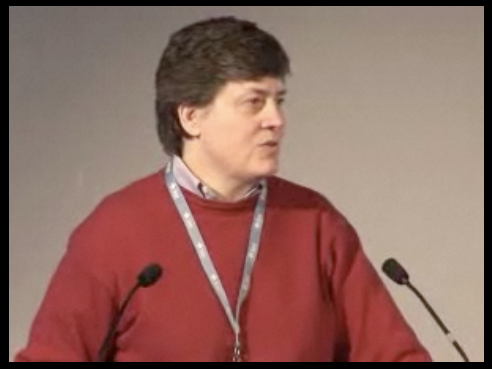
- Initially - two systems cooperate and split the problem
- As the data/service becomes useful - multiple applications want to use the information / application
- Standards for SOA need to be developed





http://www.youtube.com/watch?v=mj-kCFzF0ME

Anne Thomas Manes, Burton Group



- SOA is a long-term proposition
- Having an Enterprise Service Bus does not mean you have SOA
- SOA is about data - not technology
- SOA is an organizational "mindset"

http://www.infoq.com/presentations/anne-thomas-manes-business-soa

Good SOA Examples

- Twitter
- OAuth
- Amazon S3
- Facebook Applications
- Campus Single Signon
- LDAP

- Scope of services is understandable
- Documentation is simple, logical , and clear
- These services make developers jobs easier
- Outsource hard things - focus on fun things

Local Experience @ Michigan

- Service - UMIAC - Rosters + TextBook
  - Useds in *lots* of systems
- New service - MCommunity
  - Oracle Identity Services
- “Requirements Are”

SOA Is

- Language agnostic (php, python)
- About saying “yes”
- Meeting requirements
- A Protocol + Many APIs

SOA Is Not

- Framework specific
- About saying “no”
- Making rules about requirements
- An API

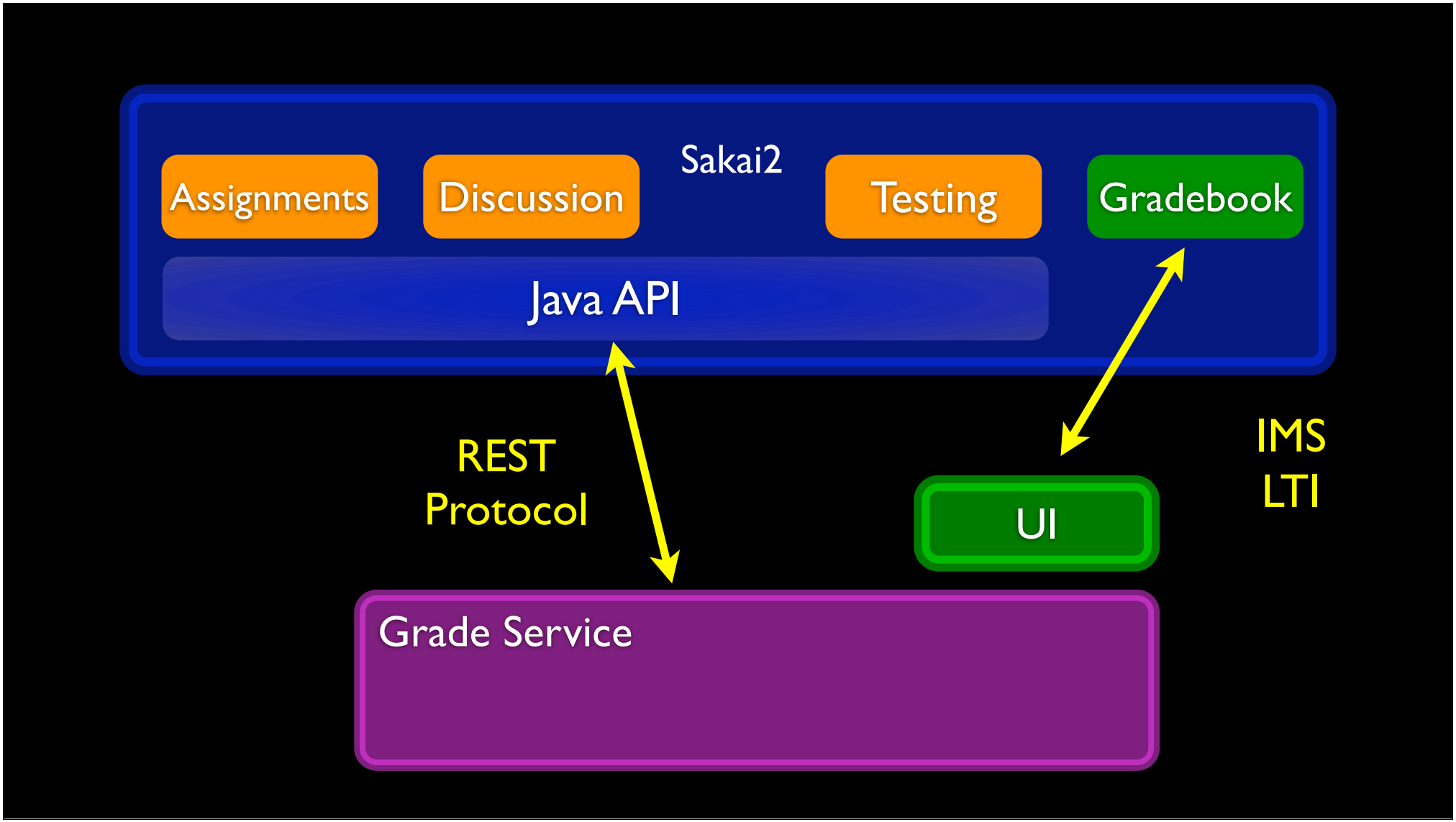
The Twitter API

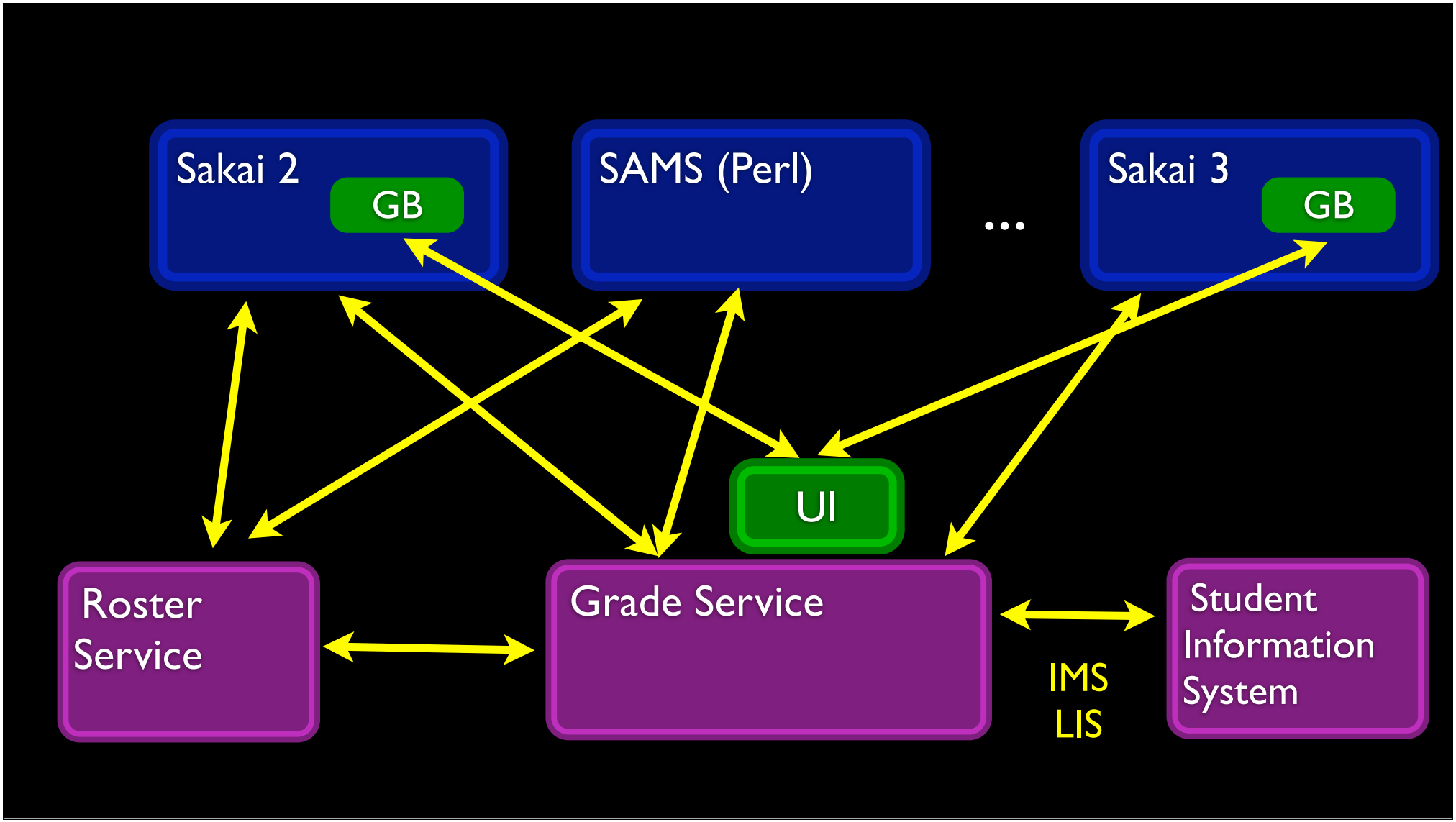
Biz Stone (Founder of Twitter): Yeah. The API has been arguably the most important, or maybe even inarguably, the most important thing we've done with Twitter. It has allowed us, first of all, to keep the service very simple and create a simple API so that developers can build on top of our infrastructure and come up with ideas that are way better than our ideas, and build things like Twitterrific, which is just a beautiful elegant way to use Twitter that we wouldn't have been able to get to, being a very small team. So, the API which has easily 10 times more traffic than the website, has been really very important to us.

http://readwritetalk.com/2007/09/05/biz-stone-co-founder-twitter/

Local Thoughts @ Michigan

- Transition between LMS Systems is like having more than one system for a while (i.e. Sakai 2 -> Sakai 3)
- Exploring a Grades Service
  - Sakai 2, SAMS (CAPA), Lecture Tools, ...
  - Accept Requirements from all systems
- We need new forms of production


Sakai2
Assignments
Discussion
Testing
Gradebook
Java API
REST
Protocol
IMS
LTI
UI
Grade Service


Sakai 2
GB
SAMS (Perl)
...
Sakai 3
GB
UI
Roster Service
Grade Service
IMS LIS
Student Information System

Summary

- About providing effective services to the enterprise
- Language agnostic (php, python)
- About saying “yes”
- Meeting requirements
- A Protocol + Many APIs