

# Development

David Mines, Chief Architect  
Selim Ozyel, Software Manager

# Outline

- Architecture
- Technology
- Configuration Challenges
- Common Configuration Mistakes
- Release Cycle
- Road Map
- Ipad Demo

# Requirements

The Interneer Intellect Platform must:

- Allow business analyst to create complex, highly-customized apps, without programming
- Work with completely different industries
- Handle large amounts of data and transactions
- Handle large number of users
- Reliable and robust performance
- Accommodate unknown future design changes to existing apps
- Accommodate future clients whom we haven't even met yet

# Architecture

- Model
  - Data (SQL Server)
- View
  - Web pages (ASP.NET)
  - iPad/iPhone (XCode and Objective-C)
- Controller
  - Back-end decisions (VB.NET)

# Model - Data

- Advanced subject in software classes
- Stored in database tables
- Accessed and updated using stored procedures
- Integration with external data sources

# Database tables

## Customer Table

ID	Name	Address	Phone #
1	David Mines	123 Spring St	310-123-4567
2	John Smith	456 Main St	310-987-6543

## Product Table

ID	Description	Base Cost	Quantity In Stock
5	AAA Batteries	200 (\$2.00)	1000
7	Magazine	350 (\$3.50)	2000

## Invoice Table

Customer	Product	Cost	Quantity
1 (David Mines)	7 (Magazine)	350 (\$3.50)	1
2 (John Smith)	5 (AAA Batteries)	200 (\$2.00)	3
2 (John Smith)	7 (Magazine)	350 (\$3.50)	1



# Database tables

## Customer Table

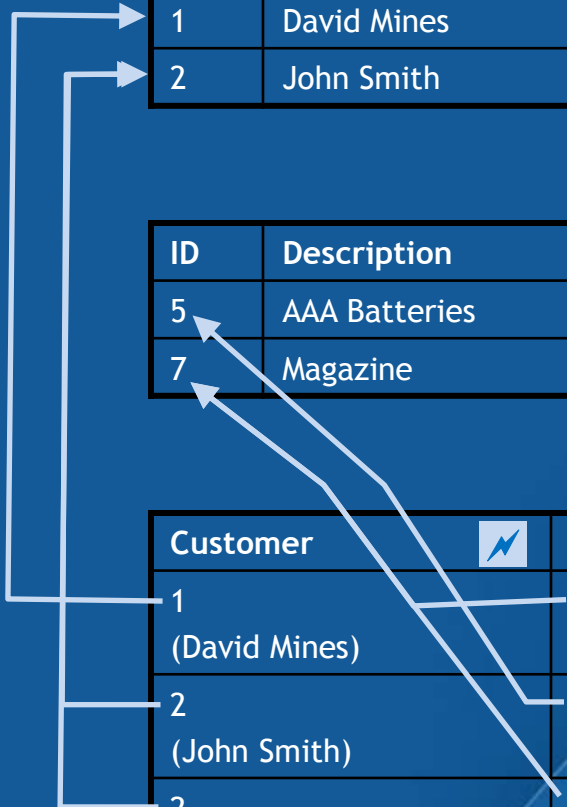
ID	Name	Address	Phone #
1	David Mines	123 Spring St	310-123-4567
2	John Smith	456 Main St	310-987-6543

## Product Table

ID	Description	Base Cost	Quantity In Stock
5	AAA Batteries	200 (\$2.00)	1000
7	Magazine	350 (\$3.50)	2000

## Invoice Table

Customer	Product	Cost	Quantity
1 (David Mines)	7 (Magazine)	350 (\$3.50)	1
2 (John Smith)	5 (AAA Batteries)	200 (\$2.00)	3
2 (John Smith)	7 (Magazine)	350 (\$3.50)	1



# Stored Procedures

- Read, insert, update and delete rows
- Written in T-SQL
- Get more complex when multiple database tables are involved
  - ```
SELECT [Customer].[Name], [Product].[Description],  
       [Product].[Base Cost], [Invoice].[Quantity]  
FROM [Invoice] WITH (nolock)  
INNER JOIN [Customer] ON [Customer].[ID] = [Invoice].[Customer]  
WITH (nolock)  
INNER JOIN [Product] ON [Product].[ID] = [Invoice].[Product]
```



# Multi-Table Examples

- Fields where Multiple property is Yes
- Categories
- Tables inside instances
- Pages with lots of fields
- Links through drop-downs

# External Data Sources

- Linked Server
  - Other databases (SQL Server, Access, Oracle, ODBC)
  - Excel
- Web Service
  - Salesforce
  - Custom (requires programming)

# View and Controller

- Views - Dynamically create:
  - Browser web pages
  - Mobile device screens
- Controllers - Generate business rules:
  - Form field behavior
  - Security/Access Control

# Intellect vs Custom Apps

- For traditional custom apps, the software developer creates in advance:
  - Database tables
  - Columns
  - Relationships
  - Indexes
  - Stored procedures
  - External data source connections
  - Views and controllers
- Intellect creates these automatically in Design/Edit Mode

# Advantages

- Accesses data as fast as a custom app
- Runs in an optimized, native environment
- Takes up less disk space
- Design/development is much quicker
- Good database practices are automatically enforced

# Technology

## Security and Scalability

- Microsoft Windows 2008 Server
- Microsoft .net 3.5 Framework
- MS SQL Server 2008





# Technology

- .net: Security, Caching, Sessions, Cookies, Compression
- SQL Server: Normalization, Stored Procedures, Indexes, Constraints, Relationships
- Web services: Secure connections, XML
- Linked Server connection through SQL Server
- Integration with Excel, Word and PDF
- Integration with Salesforce.com

# Data Center

- nGenx, GoGrid are Data Center Partners
- VM Servers on cloud – High availability
- Redundancies (Load Balancer, hardware)
- Security (Firewall, SSL)
- Backups/Offsite Replication
- 24/7 Monitoring
- Disaster Recovery option
- SAS 70 Type II Certified
- SLA



# Configuration Challenges

- The scope matters
- Leverage the platform strength
- Follow Production best practices



# Common Configuration Mistakes

- # of fields in each section
  - Page, Workflow, Personal Nav., Inner Tabs, Table (Row + Columns), Numbers (Calculations)
- Keep maintaining and optimizing
- Beware of direct changes on Production site



# Release Cycle

- Various bug fixes
- New functionalities
  - Automatic
  - License Management
  - Beta
- Feedback



# Roadmap - 2013

- iPad Application
- Web UI enhancements
- Architecture Security Enhancement
- Publish
- Support for Windows and SQL 2012





# Roadmap (TBD)

- License Management
- Integration(SharePoint, Outlook)
- Social BPM
- Import/Export Apps
- General Enhancements

# Questions & Answers

