

<<Friday Presentation 9/21/01>>

Thank you Cathy,

Let me tell you **what's going to happen here** today

- First, **I'm going to speak for about ½ an hour** about our proposed data infrastructure. I'll be doing a demo of our pilot at the end.
- Then **Steven Galligher**, Head of System's engineering at FileMaker, will talk to us about what institutions like us are using FileMaker for
- About 12:00 we'll **break for lunch** for about 15 minutes. We'll have sandwiches provided by Hope's way outside the door.
- After we come back in, Steven and **Tony Miller**, Steven's regional counterpart, will do a really cool **demo**.
- Then we'll have **time for questions**. If you can, please hold your questions till then.

- In addition to Steven and Tony, **Jane LaFrance** is here from FileMaker. She is the regional Sales rep and can answer any of your licensing questions.

OK lets start with my talk.

Today I'm going to describe the data infrastructure I'm proposing.

And I'm going to address the following four questions:

- What is a data infrastructure?
- What will it do for us?
- Why have I chosen FileMaker rather than Access, VB, etc.?
- <<**DEMO**>>
- What happens next?

First, what is a data infrastructure?

By analogy, what is a **power infrastructure: it's the stuff that gets the power from the facilities that generate power to the places we use power.**

So a data infrastructure is what we use to enter, share and report data.

In the dean's office, that is mostly Excel spreadsheets. Excel is very good at the enter and report data parts, it's *not very good for the sharing part.*

- It's not multi-user so we wind up emailing data all over the place.
- Also, if **I fix some data, you don't get the corrections** without a lot of effort on my part.
- Finally, and probably most importantly, **→Excel doesn't limit access to data based on who is looking at it. ←**
- As a result, we always have to do this **massive dis-agregation and re-aggregation** of the data each time we want to collect data, validate data or publish reports.
 - **Paper validation** cycles
 - **I can't be proactive with data** easily

So what would we want of a new data infrastructure?

Let's start by looking at a diagram that I ripped off from FileMaker.

<<Do scale/Scope diagram.>>

Scale → # of users

Scope → # of business problems addressed

Down here on the **left** are the single user systems: MS Office, PIMs, and so on. Cornell does a pretty good job of providing for this with our MS licensing agreements.

Up here at the **top** is the big iron: Oracle, PeopleSoft. All the stuff IT rolls out to the whole campus. This is **covered by CIT**

Here in the **middle** is software that is used at the **scale of the department and colleges**: Things like, CF and Access, VB, FileMaker and so on. We're all **doing our own thing** here.

Our solution must address this middle area.

In the handout there is a set of principles for data infrastructure. This is a pretty high level view and I'll let you read it on your own.

On the next page I've listed some **more concrete criteria**. Our solution must:

1. Multi-user / WorkGroup
2. Work with University Data Infrastructure. (**Upstream systems**)
3. Work with Departmental Systems (**Downstream systems**).
4. Support a complex **security model**.
5. Allow us to "**grow**" or **hire skilled developers**.
6. Allow **rapid development**.
7. **Have an active development community** on campus, particularly among people doing similar work.
8. **Software provider** looks to be viable over the long term. We don't want to settle on a tool that will not be in the mainstream in 5 years.
9. Not require a steep **learning curve** for existing staff. Have staff do some of the development.
10. Be easy to **administer**.

So why FileMaker and *not* Access, or the other options?

There are **two main reasons**, one is **technical** and the other has to do with **personnel**.

On the **technical side**, Let's look at the candidates' **sweet spots**.

FileMaker's sweet spot hits our target better:

- Solid multi user support (250 users)
- Very rapid development <<Demo in 20 hrs, SIP solution in 4 days>>
- Knowledge workers as developers.
- Integrating data from multiple sources.
- Easy administration

Steven may address this in more detail, but

Access's has two sweet spots,

- **single user analysts** using access for creating reports from multiple small data sources and
- creating tables for **access via ODBC for the web.**

Access's Weaknesses

- **Not scalable** w/o SQL server
- **Not user programmable** for multi-user solutions

The Web's Weaknesses

- **Can't print**→Mailing labels are a part of our way of life
- **Difficult to pull data from**

On the personnel side,

I'm the only FTE available for this effort. So I'd like to **leverage my time as much as possible.**

We've had **staff** all over the college **developing single user spreadsheets** for a long time.

By **providing some training**, which Nan Trussell is doing, we can **implement some of those spreadsheets** where they belong: in databases. The developer or I can then add a security layer and publish them for the college.

For Example:

- **Time away from work** tool
- Integrate internal **restricted gifts data w/ ADW data**
- Keep track of **student advisors**
- Track contacts w/ **corporate sponsors**
- **Signups** for Machine time
- **Conference registrations**

Multi-user Access or VB databases are **simply not something we can expect of our non-programmer** staff.

The **other aspect of leveraging my time**, is that **I'm already an expert FileMaker developer**, it would take years for me to become as efficient in VB, Java or Access.

So what do departments get out of this?

- **More data! Not having to dis-aggregate** data and re-aggregate data will mean that I'll have time to publish more data. And I'll be able to do it much more often.
- It's like a **Brio portal for college data**.
- **Instead of validating paper** copies and take the risk that I'll enter it wrong, you can correct it yourself and then re-run the reports at your leisure. Any corrections anyone makes will be immediately reflected in the data.
- You will be able to **export data whenever you want** it, you don't have to depend on me. You can use that data for your own specialized reports, etc.
- Finally, you can **use the infrastructure for your internal use**. If someone in your office creates a database for, say leave and vacation reporting, we can host it for you and you can make use of our authentication and security infrastructure to insure that people can only edit or view the records that they are allowed to.

Solutions Menu Demo

To gain access to the system you have to have a **small FileMaker document** that I would email you.

I've got mine here on the desktop.

This file is very simple, It just connects to the server and starts up the login process. If we change the login process, it's unlikely we'll have to change this file.

<<**Double click on startup doc**>>

Now the startup file has launched the login process on the server. This process checks to see if we are logged in with our email password and brings up the kurberos dialog if we haven't.

I'll login with my email password.

This system is really cool because I don't have to maintain a list of passwords and you don't have to remember yet another password.

Obviously for security you need *authenticate* the user. They are who they claim to be. We use the campus infrastructure to do this.

Now we have to determine that the user is *authorized* to access our system, and what parts of our system is that person authorized to see. In my case I gather the **netID**, **constituencies** and users **permits** and pass them on to the menu file.

<<**Hit enter in Sidecar Dialog to launch menu**>>

I'm now authorized and am being shown the **only the solutions I have access to**.

There is help here. <<**Describe the Icons**>>

Here are some **example solutions** <<**Describe them**>>

And I can launch the solutions by pressing on the button <<**Launch SIP**>>.

Let's take a look at SIP. We'll be launched into a readme screen.

<<Walk through the available buttons>> click on **Staff merit tool**

SIP Tool

Sip tool was used for:

- Modeling SIP program strategies w/in university and budget constraints
- Gathering Merit and Performance data from departments
- Running lots of reports including budget commitment reports, data validation reports, etc.
- Submitting the final data
- Had 3 models for SIP distribution, staff, faculty and ANF

Our **SIP data** is rather complex and integrates a lot of data.

- SIP roster
- Market Median Data
- Work Force Planning
- Band Minimums
- 3 or 4 tables we created internally
- Total 15 tables

All of the data is updated dynamically

<<demo adding info about one person>>

I couldn't have done this without FileMaker

This layout took less than one week

One last thing: We want to allow users access to their data

<<Go to **Base Data**>>

Now all looks pretty secure here, but I know something about FileMaker. Let me chose *Show All Records* and see what happens.

Foiled!

This **record level security is new** with FileMaker 5.5. and is the reason I can lay the security onto a file after it has been created. The old way was a real pain both for the user and the developer.

What's next:

- We would like to have decision **in time for SIP**, which means no later than sometime in October.
- **Cost of entry** is buying FMP 5.5
- We want to organize a **large purchase** (sign up sheet and price list)
- I'd also like to get an active group of people **considering using this sort of infrastructure** to meet together to discuss it further. I'll be posting more information on **cu-filemaker-L@cornell.edu**