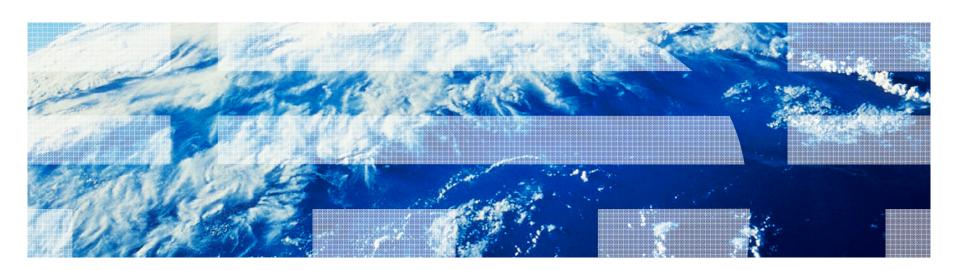


Datacap Advanced Technical Workshop

for IBM Business Partners

Februray 2012, Rome



A brief introduction to your host for the next two days



my name is Stefan Matschek

I am based in Vienna, Austria
member of the IBM Pan-IMT ECM Technical Sales Team
and one of your Datacap SME's in Europe

my current TOP THREE working interests

- 1. Growing your Datacap Skills
- 2. Growing your Datacap Skills
- 3. Growing your Datacap Skills

Beside those core objectives I am ..

- supporting Datacap sales situation throughout Europe
- participating in the Datacap Feedback Program for the next Release
- keeping an eye on our extended Datacap Eco System
- keeping another eye on our Datacap Community in Europe



Welcome ALL to this Advanced Datacap Workshop

First name	Last name	E-mail address	Company	Country	
Marko					
Ivan					
Katai					
Bjorn					
Giacomo	REDACTED!				
Luca					
Laura					
Alessio					
Rocco Michele					
Matteo					
Roberto					
Olga					

Our Overall Agenda

Day 1

"A Datacap Project Life Cycle within a Single Day"

Best Practices and Tools for a sucessful Datacap project delivery coverying: *Analysis, Design, Build, Test, Deployment, Maintainance Phase*

You will learn as a team in a team through your team!

Day 2

"A Day with Hands-On Datacap Application Development"

Strengthen your Datacap Application Development Expertise

Agenda - Day 1

Morning Session

■ 10:00 – 10:15 Welcome and Introduction

■ 10:15 – 10:30 Workshop Overview and Logistics

■ 10:30 – 12:00 How to Prepare, Run and Execute a Datacap Project

Lunch

Afternoon Session

■ 13:00 – 14:00 Team Exercise #1: Prepare, Plan and Organize for your Project

■ 14:00 – 15:00 A Compilation of Datacap V8.1 News

Coffee Break

■ 15:15 – 16:15 Lab Exercise #2: APT

■ 16:15 – 16:45 Lab Exercise #4

■ 16:45 – 17:00

Agenda - Day 2

Morning Session

• 09:30 – 09:45 Where to get further Information and Training

■ 09:45 – 10:30 The Datacap Application Panel Development Essentials

Break

■ 10:30 – 11:15 Lab: DotEdit Personalization with Custom panels

■ 11:15 – 11:45 Taskmaster Web Applications and Web Application Server Details (WebScan, WebVerify, WebMonitor, WebAdmin, RV2, IIS, etc.)

■ 11:30 – 12:00 Taskmaster Fingerprint & Fingerprint (Web) Service Details :

Lunch

Afternoon Session

■ 13:00 – 14:00 Datacap BestPractices an Application Walkthrough Task by Task

■ 14:00 – 14:30 Lab: How to – Customize the Taskmaster Web Form - Averify

Coffee Break

■ 15:00 – 15:30 Datacap Security

■ 15:30 – 16:00 Wrap up

Break

■ 16:00 – 17:00 Open Lab

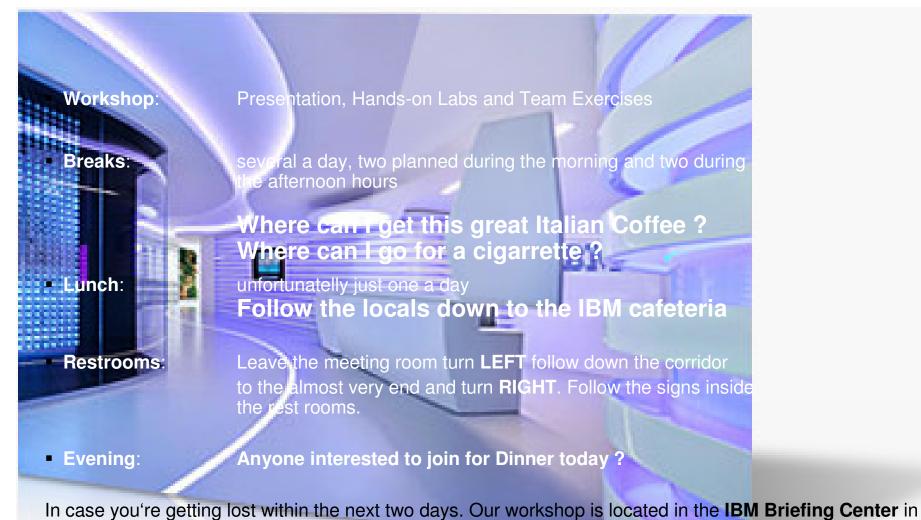


Lets spend some few minutes on YOU

- Please introduce yourself in a minute (Company, Job Role, ..)
- What Datacap skills do you have and what is your core professional domain (e.g. Designer, Developer, Architect, Technical Project Manger, Other)
- What are your personal learning expectations from this Workshop
- What are your current TOP THREE Datacap demands
- How long are you in your current company/position



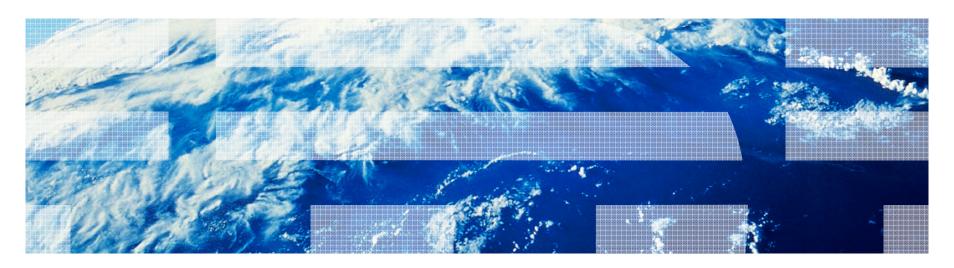
Course Logistics



Rome in 5th Floor (= Piano 5) in Meeting Room "A...."



Your Project Begins





- Starting an IT Project with a unknown/new customer can become a cumbersome process ...
 - Who is the Project Sponsor?
 - Where are those people with the requried business insights?
 - Why do they ask me know on which HW they will need in 6 month? I don't know either
 - Ahhh What type of project is this ?
 - We sold them Datacap but no one seems to care? Was it just a sales mistake?
 - They have so many locations, questions, requirements where should I start working on and where should I go to get all the questions answered?
 - Why am I talking only to IT / LOB / etc. where are the people who matter for my project objective ?
 - Who has the lead at this customer project?

.. I feel so alone :: - (



Understanding your customer's

- Demands
- Existing Applications, Solutions and Infrastructure
- Future Directions and Plans (both business wise and infrastructure wise)
- Organisation
- Business Language
- Corporate Culture
- Business Model
- Business Pain Points

All of this isn't always that straight forward and easy ..



Common seen reasons for project issues / failure:

- Project team did not have the required skills
- Project team had a long history in capture but not with Datacap and strictly followed the steps true for the other capture SW
- Project team did not spend enough time on the project definition (in/out of scope).
- Project team did not spend enough time on prerequisites
- Project team did not spend enough time on architectural constrains
- Project team did not thouroghly considered differences on performance (dev/test/production)
- Project team did not plan thouroghly for mitigating risks
- Project team did not plan for another project step iteration
- Project team failed in project documentation
- ... milestones, change mgmt, bugfixing, educating, and many more ...



Common seen issues caused by customer:

- Customer is missing proper (technical) skills
- Customer has a long history in business but not with IT projects
- Customer has not precisely defined the project scope
- Customer has not mentioned their MUST HAVE / MUST FOLLOW prerequisites
- Customer has not mentioned some key architectural constrains
- Customer has not mentioned his/her performance expectations / wishes
- Customer has not communicated major project risks points
- Customer has a tight go-live plan (zero buffers)
- Customer isn't using a precise wording
- ... milestones, change mgmt, bugfixing, educating, and many many more ...



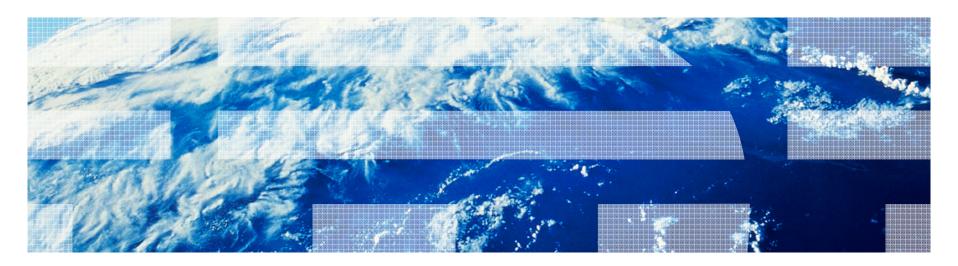
"Finally it isn't your customer's fault or responsibility in gather all required information and thoroughly plan for a successful project and solution delivery."

It is all YOURS!

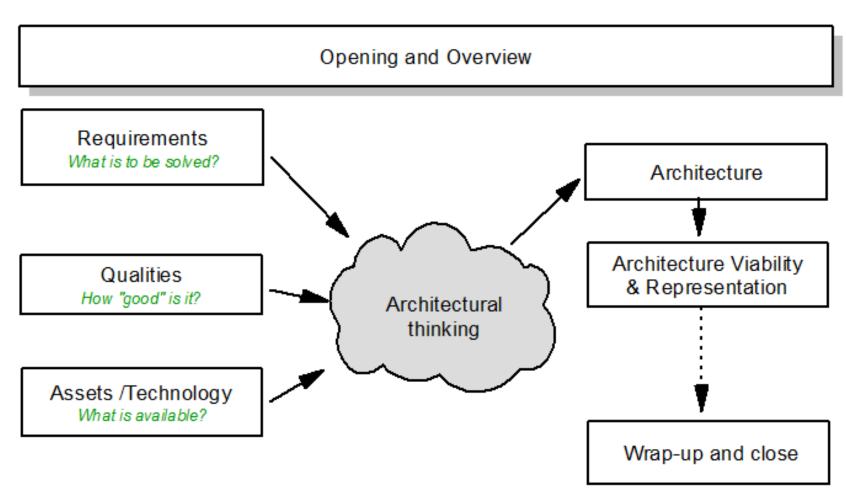
You have to address, consider and plan for each of those issues and risks in your project!



Plan and Prepare for your Project



Planning involves looking at inputs, the thinking process, and outputs

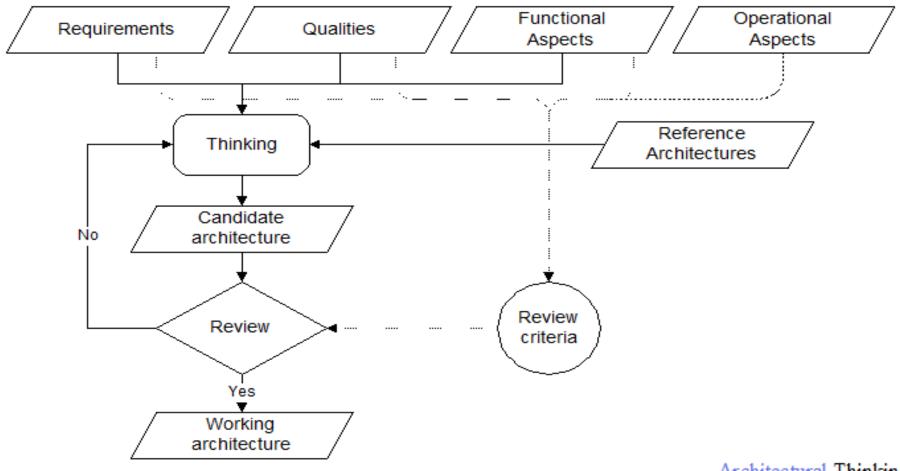


Architectural Thinking

16



Planning for a solution is an iterative and complex process



Source: Architectural Thinking Course

Architectural Thinking

Plan and Prepare for your Project

The Project Kick-Off Meeting

A one Fits All Meeting

"Think of it like the Overture in a Great Opera"

But don't let your project end like an Opera!

The Project Kick-Off Meeting

- Prepare for the Meeting
- Introduce the Team
- Introduce the Project
- Introduce the Solution
- Discuss Key Project Aspects
- Listen and Document all Comments (→ Create a protocol)

Don't Overload your Project Kick-Off Meeting!

Dependent on your project complexity and/or number of people involved plan for a 2nd, 3rd iteration and schedule a Project Definition Workshop(s)

Plan and Prepare for your Project

The Project Definition Workshop

"The big brother of the Kick-Off meeting"

The Results will be documented in a Project Definition Report!

The Project Definition (Workshop)

• Prepare the meeting:

- Document the project base: project definition incl. customer's project execution guidelines if existing
- Project organisation

Objective: General understanding of project responsibilities

Run the meeting:

- Precise definition of objectives (matching of objectives vs. expectations)
- Precise project delivery definition (project scope)
- Tasks identified out of scope definition (use and define precise "project terminology" – wording)

The Work Breakdown Structure

What should be inside your project planning WBS?

- Provision for Known Structures (What and How)
- Definition of WBS (Results = Objects, Activities = Methods, Offer = Project)
- Prerequisites for WBS (Requirements, Recommended Solution, Working/Architectural Models and Standards)
- Objective of WBS (identifying project scope and –structure; logical working sequence; work unit segments; order and responsibility of results and work units)
- Usage (estim. base, grouping, plan/verify, Milestones/Checkpoint, progress report, risks, communication, responsibility assignm., interfaces/dependencies)
- Type, Grouping and Description (Result: What = Object xy; Activity: Phase = Taskgrp etc.)
- Objective of each structure for planning (Documentable, Planable, Executable, Reproducable)

Plan and Prepare for your Project

The Work Breakdown Structure

"Tailoring your project in well manageble entities"

Manage Your Project Don't Let The Project Manage You!



Phases, activities and tasks structure the project and reduce complexity

Phases

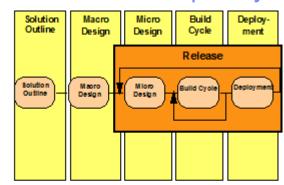
- Major contractual milestones
- Influenced by how our customers want to do
- business and our software engineering theory
- Coupled with the estimating approach

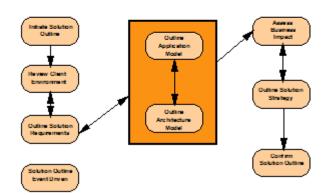
Activities

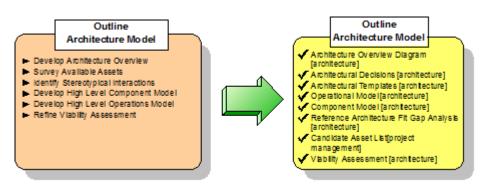
- Groupings of related tasks
- Sequences the work during an engagement

Tasks

- Unit of work for planning, scheduling and
- estimating
- Process of transformation
- Each task description defines
 - inputs
 - outputs
 - roles

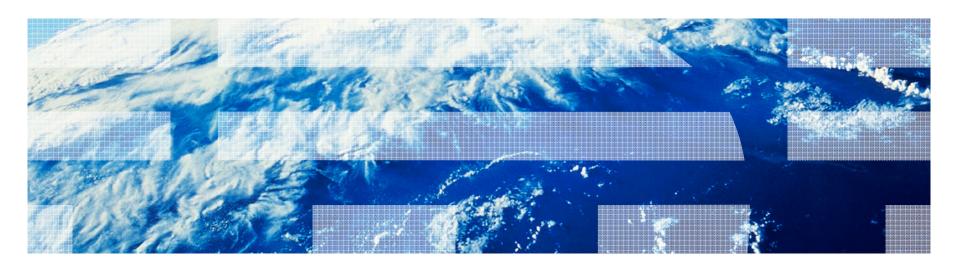








Analisys and Design for your Application



Analysis

Entry Criteria for Analysis are:

- Cost Coverage / ROI Approved
- Project Plans controlled / approved
- Detailed Project Plan / Check-point-plan for Section "Analysis"
- Project Definition Report exist

Common Topics covered in an Analysis:

- Datamodel
- Processmodel (User View)
- Relationships between Data- and Processmodel
- In/Out Scopt, Interfaces to external systems (Context Diagram)
- Description: How to convert old systems
- Inital GUI Design
- Appl Prototyping

Common Topics covered in an Analysis:

- User/Usage Diagrams
- Usability (Hotkeys; Mouse etc.)
- GUI element / list layout (Drop-down lists, Combo box, Buttons, Fields, sorting etc.)
- Parameter externalisation (flexibility requirements)
- Required language support
- User / -profiles
- Errorhandling / -messages
- Multi-language support
- Regional support (regional law dependencies)
- Testorganisation / -structure / Functional Test Cases
- Architectural-Guide
- Documentation (Glossar MUST / Sample Chaptures / Plan)

Another Term for Analysis is High Level Design (Macro Design)!

Design

Entry Criteria for Design are:

Output Criteria of Analysis and the other previous project phases

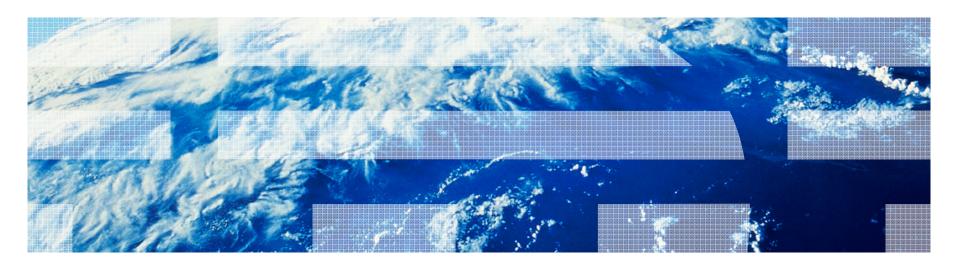
Common Topics covered in an Design:

- Application Architecture
- Programming structures
- Datasets
- Discrepancies to Architectural-Guidelines
- Definition of Performance Criteria
- Errorhandling
- All GUI Definitions
- Dependencies
- Security (Appl + Data)
- Recovery
- Access control
- Test cases (Unit-, Integration, Systemtest)
- Architectural Guide (update)
- Prototype (update)

Another Term for Design is System Design (Micro Design)!



Build and Test your Application



Build

 For relevant details on How to build a Datacap Application I recommend to thoroughly study and read our Guide Application Developement using IBM Datacap Taskmaster Capture (SC19-3251-05) which can be found in our Datacap V8.1 Publication Library on:

http://www-01.ibm.com/support/docview.wss?uid=swg27035774#docs

- → go to the PDF documentation section for download
- In addition our regular Datacap Information Center covers a whole section on **Developing** capture applications

http://pic.dhe.ibm.com/infocenter/datacap/v8r1m0/index.jsp

- → go to the referred section in the Contents table
- Implementing Imaging Solutions with IBM Production Imaging Edition and IBM Datacap Taskmaster Capture

http://publib-b.boulder.ibm.com/abstracts/sg247969.html?Open



Lab Exercises

- For you as advanced Datacap professionals/developers we recommend to follow on following Lab exercises in your Lab Handbook:
- FastDoc
- Accounts Payable (APT)
- Datacap Studio Deep Dive
- Email Integration
- P8 Integration
- Batch Splitting
- Web Services

Figure 3-1 shows a typical Taskmaster process.

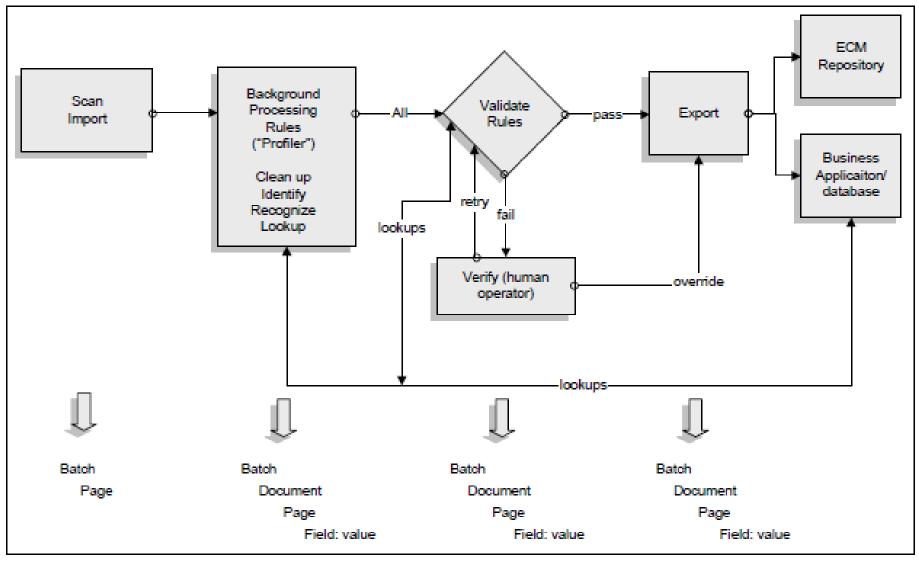
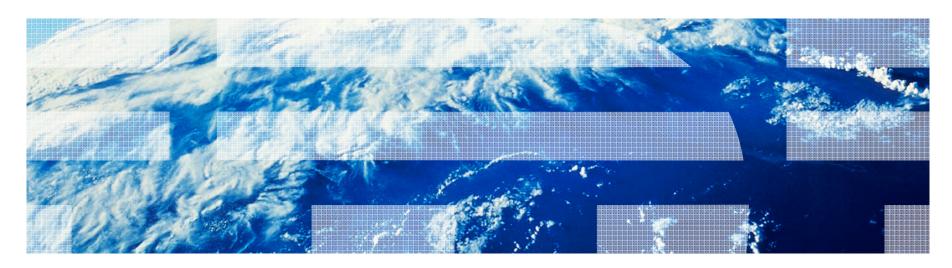


Figure 3-1 Taskmaster process



Deploy and Maintain your Application



Deploy and Maintain

I'm listing some of your communicated demands towards this topics based on our valuable individual conversations during the past two days here:

- Best practises to maintain already deployed productive Datacap applications:
 - Custom Application Versioning (DCO, Application Rules, Custom Action, etc.)
 - Version Control Managment Integration (Recommended tools; How to integrate; What to avoid)
 - Maintainance of a productive Datacap Application (PMRs, Fixes, Updates, Backup/Recovery etc.)
 - Change Request Management

Stay tuned, I will come back with more on those topics to you!



Agenda - Day 2

Morning Session

■ 09:30 – 09:45	Where to get further Information and Training
■ 09:45 - 10:30	The Datacap Application Panel Development Essentials
Break	
■ 10:30 – 11:15	Lab: DotEdit Personalization with Custom panels
1 1:15 – 11:45	Taskmaster Web Applications and Web Application Server Details (WebScan, WebVerify, WebMonitor, WebAdmin, RV2, IIS, etc.)
■ 11:45 – 12:30	Lab: How to – Customize the Taskmaster Web Form - Averify

Lunch

Afternoon Session

■ 13:30 – 14:30	Datacap BestPractices an Application Walkthrough Task by Task (Hands-on & interactive)
Coffee Break	
■ 14:30 – 15:00	Taskmaster Fingerprinting (DCO/FPXML) & Fingerprint (Web) Service Details
■ 15:00 – 16:30	Datacap Security (skipped for an extende Application Walkthrough as known to everybody)
■ 16:30 – 17:00	Wrap up



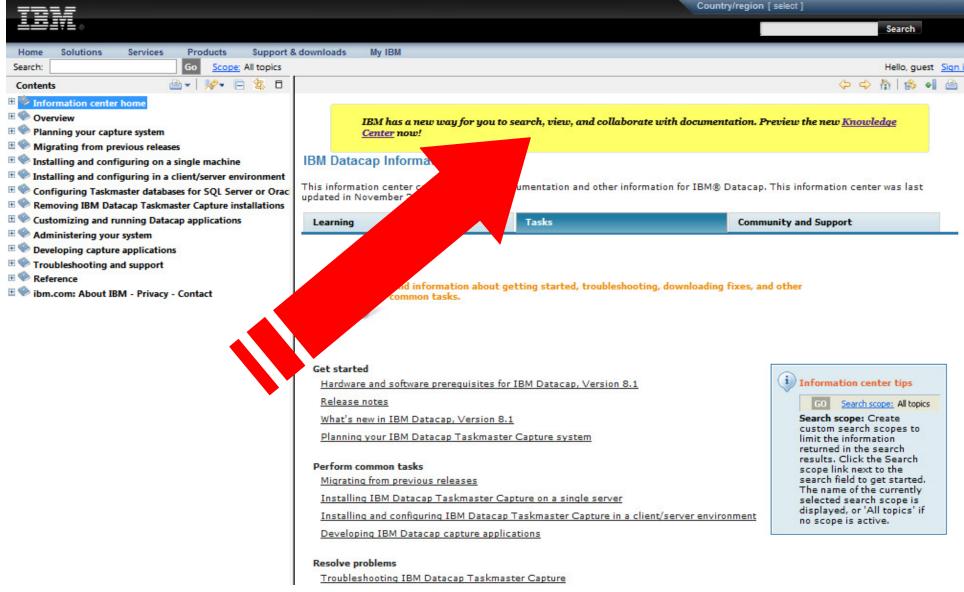
Slides Day 2

See the independed slide leveraged on day 2!

■ This slide deck just contains some few additional slides on various informations shared with you during this hands-on day.

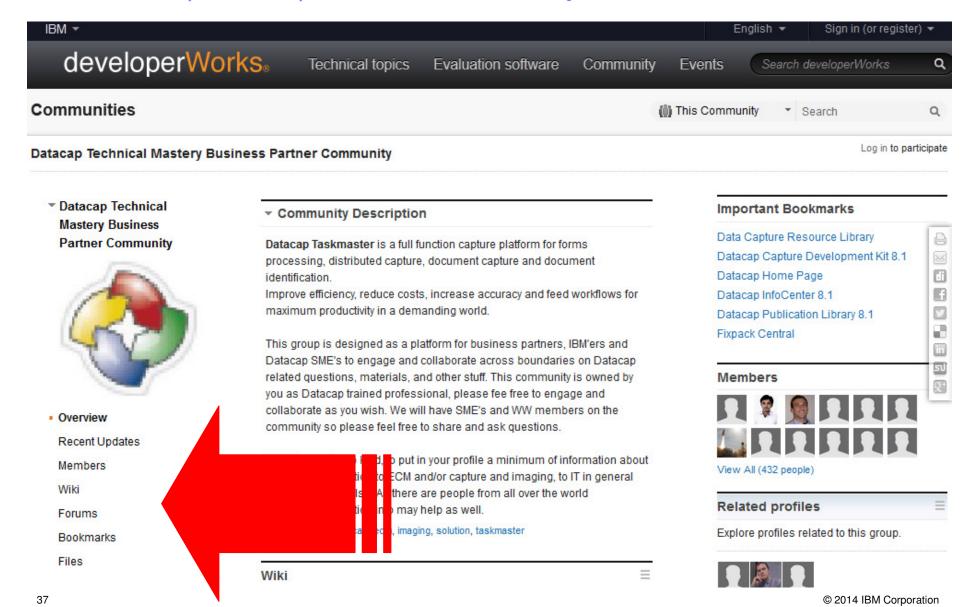


The NEW - IBM Datacap Knowledge Center





Our Datacap developerWorks Community





DotEdit – Image Manipulation

- Image Manipulation
- DotEdit does not allow direct manipulation of the image control from the user panel.
- DotEdit DOES now refresh the image on return from an AltTaskProfile.
- TIF/TIO toggle needs to be done via scripting (SwapImages from Invoice.rrx may be used, however since the swap is permanent you should create a variable that designates which actual image is being used so the proper one can be exported.)
- Page browsing/Image zooming is done via mouse only.
- AltTaskProfiles can run a DotNet action that throws up an alternate image control.
- Warning! Image Manipulation will most likely make your application incompatible with TMWeb.



Backup Slides



Basic configuration concepts

Rulesets, rules, functions, and actions



- Configurations are created by configuring actions, functions, rules, and rulesets
- Actions discrete operations available via a reusable library
- Some actions are perform complex tasks
 - That is, perform full page OCR (Optical Character Recognition), perform image enhancement, upload document to repository
- Some actions perform very simply tasks
 - For example, set a variable value, rename a file, compare values of two variables
- All actions return a boolean return value, and optionally other data
- Functions are a group of actions that are executed until one of them returns false or until all actions are executed successfully
- Functions also return a boolean value, determined by success of its actions. If an action returns false, then the function returns false. If all the actions in a function are executed successfully, then the function returns true.



Example

Tests the first barcode found with value specified by the parameter

Function1

ReadBarCode("ENDDOC")

SetDCOType("EndDoc")

SetDCOStatus("74")

SetDocumentType("Inst Multi")

- The first bar code is read on the page.
 - If the value is "ENDDOC", then action returns true.
 - If value is something other than "ENDDOC", or no bar code is found, then action returns false and execution of actions in this function end.



 Example of functions and actions being used to help classify and separate a document using barcodes

Function1

ReadBarCode("ENDDOC")

SetDCOType("EndDoc")

SetDCOStatus("74")

SetDocumentType("Inst Multi")

*** Execution of functions ends when one function returns TRUE

Function2

ReadBarCode("ENDCLM")

SetDOCType("EndClaim")

SetDOCStatus("74")

Function 3



A RULE is made up of one or more functions.

```
Classify by Barcode Rule
Function1

ReadBarCode("ENDDOC")

SetDCOType("EndDoc")

SetDCOStatus("74")

SetDocumentType("Inst Multi")

Function2

ReadBarCode("ENDCLM")

SetDOCType("EndClaim")

SetDOCStatus("74")

Function 3

SetDocStatus("49")
```

- Functions are actions sequenced by logical AND conditions
- Rules are functions sequenced by logical OR conditions

⁴⁴ This is an example of barcode-based classification and separation



Another example:

```
Lookup Provider State Rule
  Function1
    Is Field Hidden
Function2
    ConvertToUpperCase()
    SmartSQL("Select PO_Abbreviation from StateZip where PO_Abbreviation='+@F+';","No")
    SetConf("9")
Function3
    AddToErrorMsg("Invalid State Found")
```

This is an example of field validations using database lookups



- Rulesets are groups of related rules
- Example:

Validation Ruleset

+Lookup Provider State Rule

+Lookup Provider ZIP Rule

+Get Tax ID or SSN Rule

+Check Valid Data Rule

+Calculate Charges Rule

The "+" is to remind you that the rules are expanded into functions and actions



- Actions are reusable and are in the Actions library
- Custom actions can be written in VisualBasic and .NET
- Look in C:\Datacap\RRS for existing shared actions written in VisualBasic (with .rrx extension)
 - For example, Export to P8 actions are stored in C:\Datacap\RRS\FilenetP8.rrx
- Application specific actions are stored in the application directory
 - For instance, Validations actions specific to the Medical Claims application are stored in C:\Datacap\MClaims\dco_Institutional\rules and in
 - C:\Datacap\MClaims\dco_Professional in a file called MC_Validation.rrx



Basic configuration concepts

The document hierarchy



- Taskmaster deals with batches of documents
- A single batch of documents is processed by a single configuration (or job)
- Let's look at what is in a batch

- A batch is made up of one or more documents
 - Each document can have a different document type
- A document is made up of one or more pages
 - Each page can have a different page type
- A page is made up one of more fields
 - Each field can have it's own characteristics
- Documents and batches can also have fields associated with them. More on this later....
- Batches can also have pages that are not part of a document.



Example – The Account Payable application

APT ← Batch

Other ← Page

Invoice ← Document

+Main_Page ← Page

+Trailing_Page ←Page

+Attachment_Separator ←Page

+Attachment ←Page

Separator ← Document

Document separator ← Page

The "+" is to remind you that the pages can be expanded into one or more fields



Example - The Accounts Payable application (continued)

```
Main page
 Vendor
 Vendor_Number
 Remittance_Zip
 Invoice_Number
 Invoice_Date
 PO Number
 Tax
 Shipping
 Invoice_Total
 Invoice_Type
 Add_New_Fingerprint
 Routing_Instructions
 Details
```



- Fields can be "hidden"
 - For example, Routing_Instructions is not a field that you capture from an invoice, nor is it anything that shows up on the Verification user interface
 - It contains data that is used to determine processing flow (more on workflow later ...)
- Fields can have sub-fields
 - For instance, Details is a field that contains subfields for the invoice line item data

Details

Lineitem

ItemID

ItemDesc

Qty

Price

LineTotal

POLineNum



- Batches and documents can also have fields associated with them
- Example:
 - The Medical Claims application batch has two fields associated with it
 - Expected_Documents
 - Expected_Pages
 - A scanner operator can enter these control values prior to scanning a batch, and then Taskmaster can perform validations against these expected values



Linking rules to the document hierarchy

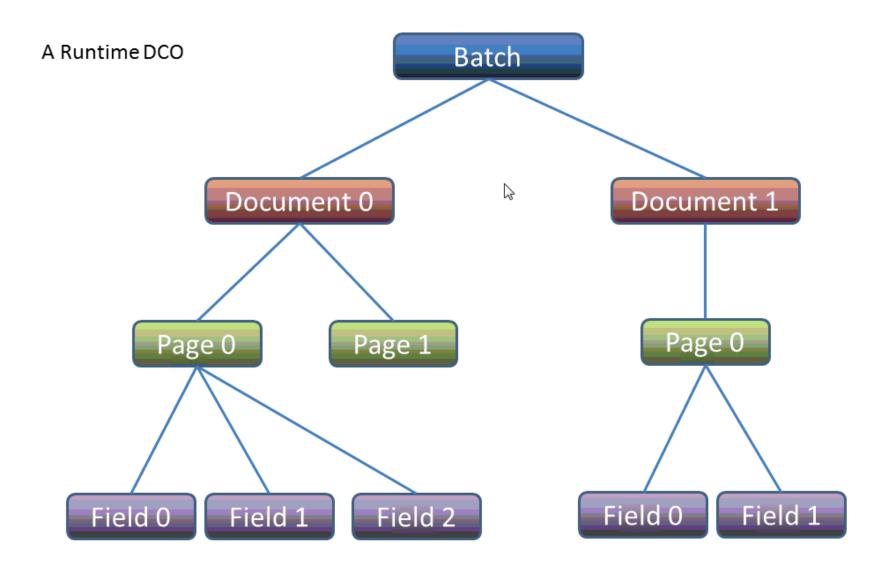
- Rules can be linked, or "bound," to any element of the document hierarchy
 - You **scan** a batch
 - You upload a document
 - You **classify** a page
 - You validate a field
- Rules can be bound to either the opening or closing of an object
- Only one rule per ruleset can be bound to any one part of the hierarchy



- Each element of the document hierarchy has variables associated with it
 - Accessed by locking the hierarchy, then right clicking and selecting "Manage Variables"
- Three default variables defined for any object in the hierarchy
 - -MAX
 - MIN
 - ORDER
- These variables are used to help determine if documents and batches are being assembled correctly
 - We will look into this in more detail later in the lab

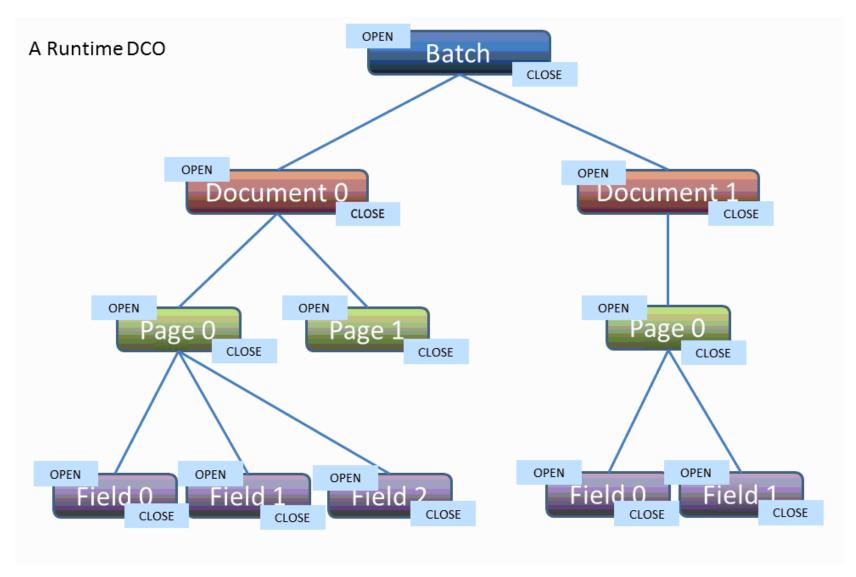


A Runtime DCO





The Runtime DCO – Processing Tree

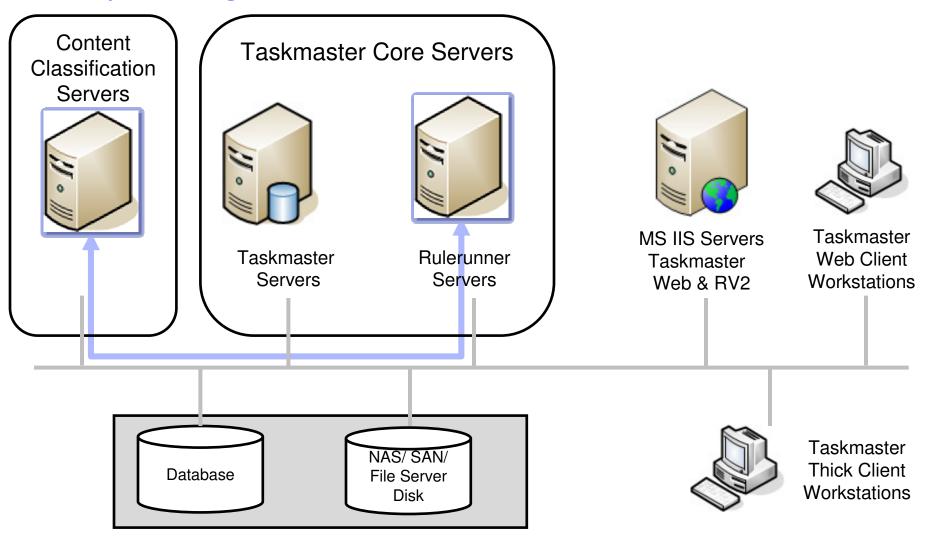




USING IBM CONTENT CLASSIFICATION WITH DATACAP TASKMASTER



Taskmaster – Content Classification Conceptual Diagram





Content Classification

Classification by Contextual Understanding

Text Analysis, Statistics, and Learning by Example



Datacap Taskmaster

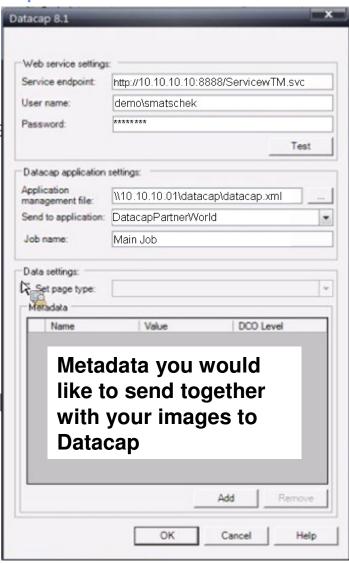
Feedback Input Output 1. BORROWER'S PROMISE TO Note Main Page (92%) Note Main Page PAY In return for a loan that I have received, I promise to pay U.S. \$ (this amount is called "Principal"), plus interest, to the order of the Lender. I will make all payments under this Note in the form of cash, check or money order. I understand that the Lender may transfer this Note.

Content Classification



How does NSi AutoStore integrate with Datacap?

- The Datacap component is an AutoStore Route component (and eConnector) that creates batches in a Datacap processing server via Web Services
- Integrate a Datacap workflow with AutoStore system metadata and dynamic variables (NSi RRT's)
- Job failure/success notification and audit tracking capabilities
 - Notification Options component
 - Workflow Tracker component
- Features
 - Capturing scanning related meta-data at the panel of an MFD or Mobile device (Web Capture)
 - Assigning page type to scanned documents
 - Assign batch, page and field level meta-data from AutoStore





A Compilation of Datacap Technotes

- Why is the IBM Datacap Job Monitor dropdown list turning into an edit box?
 - http://www-01.ibm.com/support/docview.wss?uid=swg21648528
- Cannot read data file{0} error with IBM Datacap Taskmaster Capture
 - http://www-01.ibm.com/support/docview.wss?uid=swg21660876
- Custom Taskmaster .NET action reports couldn't load needed object error in IBM Datacap Taskmaster Capture http://www-01.ibm.com/support/docview.wss?uid=swg21570537
- Thumbnail scale setting is not saving with IBM Datacap Taskmaster Capture http://www-01.ibm.com/support/docview.wss?uid=swg21640649
- IBMCM actions abort after applying Fix Pack 2 in IBM Datacap Taskmaster Capture http://www-01.ibm.com/support/docview.wss?uid=swg21663064
- VScan no longer functions in IBM Datacap Taskmaster Rulerunner http://www-01.ibm.com/support/docview.wss?uid=swg21660978
- Unable to add new jobs and/or tasks in IBM Datacap Taskmaster Capture http://www-01.ibm.com/support/docview.wss?uid=swg21651849
- IBM Datacap Taskmaster Capture creating too many new fingerprints http://www-01.ibm.com/support/docview.wss?uid=swg21578463
- Image view position moves between images with IBM Datacap Taskmaster Capture http://www-01.ibm.com/support/docview.wss?uid=swg21639843
- Couldn't locate RRX code error with IBM Datacap Taskmaster Capture http://www-01.ibm.com/support/docview.wss?uid=swg21643766

- Fingerprint zones do not save correctly with IBM Datacap Taskmaster Capture
- http://www-01.ibm.com/support/docview.wss?uid=swg21644772
- Batch aborts when using Upload client service with IBM Datacap Taskmaster Capture http://www-01.ibm.com/support/docview.wss?uid=swg21626721
- Unable to reset zone error using click-and-key with IBM Datacap Taskmaster Capture http://www-01.ibm.com/support/docview.wss?uid=swg21652511
- Settings.ini required error opening Fingerprint Maintenance Tool with IBM Datacap Taskmaster Capture http://www-01.ibm.com/support/docview.wss?uid=swq21632818
- Unable to login to two applications simultaneously in IBM Datacap Taskmaster Capture http://www-01.ibm.com/support/docview.wss?uid=swg21599801
- Application Wizard buttons not visible in IBM Datacap Taskmaster Capture http://www-01.ibm.com/support/docview.wss?uid=swq21634253
- Quattro service crashes periodically in IBM Datacap Taskmaster Capture http://www-01.ibm.com/support/docview.wss?uid=swg21515425
- Error 4514 file not found error with IBM Datacap Taskmaster Capture scan station http://www-01.ibm.com/support/docview.wss?uid=swg21655100
- IBM Datacap Taskmaster Capture ICR error code 12 http://www-01.ibm.com/support/docview.wss?uid=swg21654520
- DotEdit(TF) shows rendering problem with multiple DCimage controls in IBM Datacap Taskmaster Capture http://www-01.ibm.com/support/docview.wss?uid=swg21639519



Each phase produces work products from a number of domains

