



Does your customer know what they are signing off?

Maria Aretoulaki (PhD)
Head of Speech Design



SpeechTEK 2007

Session: *Communication Strategies for Speech Projects (B105)*

Monday, August 20 2007, 4:15-5:00 p.m.

#1 PROBLEM

- “Difficult” customers!
- Worried customers!

#2 PROBLEM

- People with different skill sets
- People with different interpretations

#1 PROBLEM

- “Difficult” customers!
 - Never-ending Change Requests
 - Constant changes to the scope
 - Costing time and money
 - Accusations of non-compliance to original design
 - Marring the credibility of the service provider
 - Losing trust → losing business
- Worried customers!
 - ‘*Will I get what I paid for?*’
 - Anxious about the unknown

#2 PROBLEM

- **People with different skill sets**
 - Non-technical people
 - **Customer-side:** Project managers, Business unit managers, call centre managers
 - **Provider-side:** (pre-)sales engineers, account managers, Project managers
 - Technical people
 - **Customer-side:** IT managers, database specialists
 - **Provider-side:** VUI designers, architecture specialists, application developers
- **People with different interpretations**
 - Requirements → **Design A** for Non-techies
 - **Design B** for Techies

GOAL

- ✓ **Manage customer expectations**
 - Specify what should be delivered unambiguously
 - Ensure customer reviews and consensus on system functionality early on
- ✓ **Intertwine design with development**
 - Make transition smoother from Spec and rough design to Implemented Call-flow
 - Speed up both the design & the development processes

SOLUTION

- **Standardise customer documentation**
 - Different levels of detail for different audiences:
 - pre-sales pitch or spec for Java developers?
 - Document templates
- **Standardise Project communication**
 - Involve the customer early on in the design
 - Intertwine VUI design with implementation
- **Standardise Translation from Specs to Design**

METHODOLOGY

Combine two extremes:

1. **Top-down** approach (standard)

- high-level diagram of functionality
- AND

1. **Bottom-up** approach

- collect example dialogues together with the Customer at a Discovery Workshop

→ → *Infer + Specify functionality*

STANDARDISE Documentation!

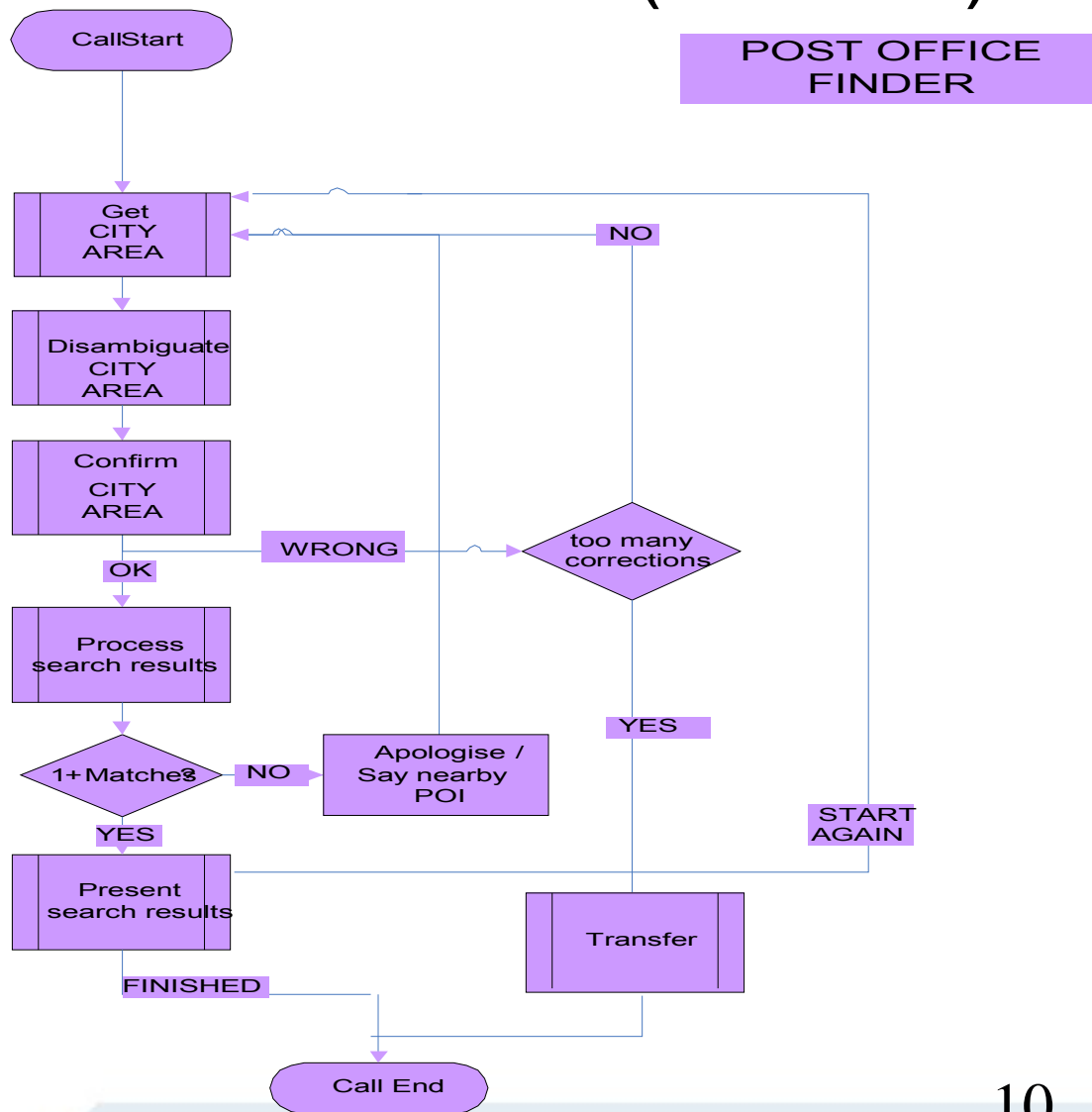
- Represent system functionality, business logic and call-flows:
 - **Incrementally**, showing different levels of detail
 - depending on **target audience**
 - (Pre)-sales / Customer Business Unit managers / PMs
 - Customer IT Dept., Call Centre Leaders
 - Application developers, database experts
 - In a **modular** fashion
- Use Document Templates
 - well-specified and fixed
 - Start from the abstract and go to the more specific

3-tier modular & incremental representation

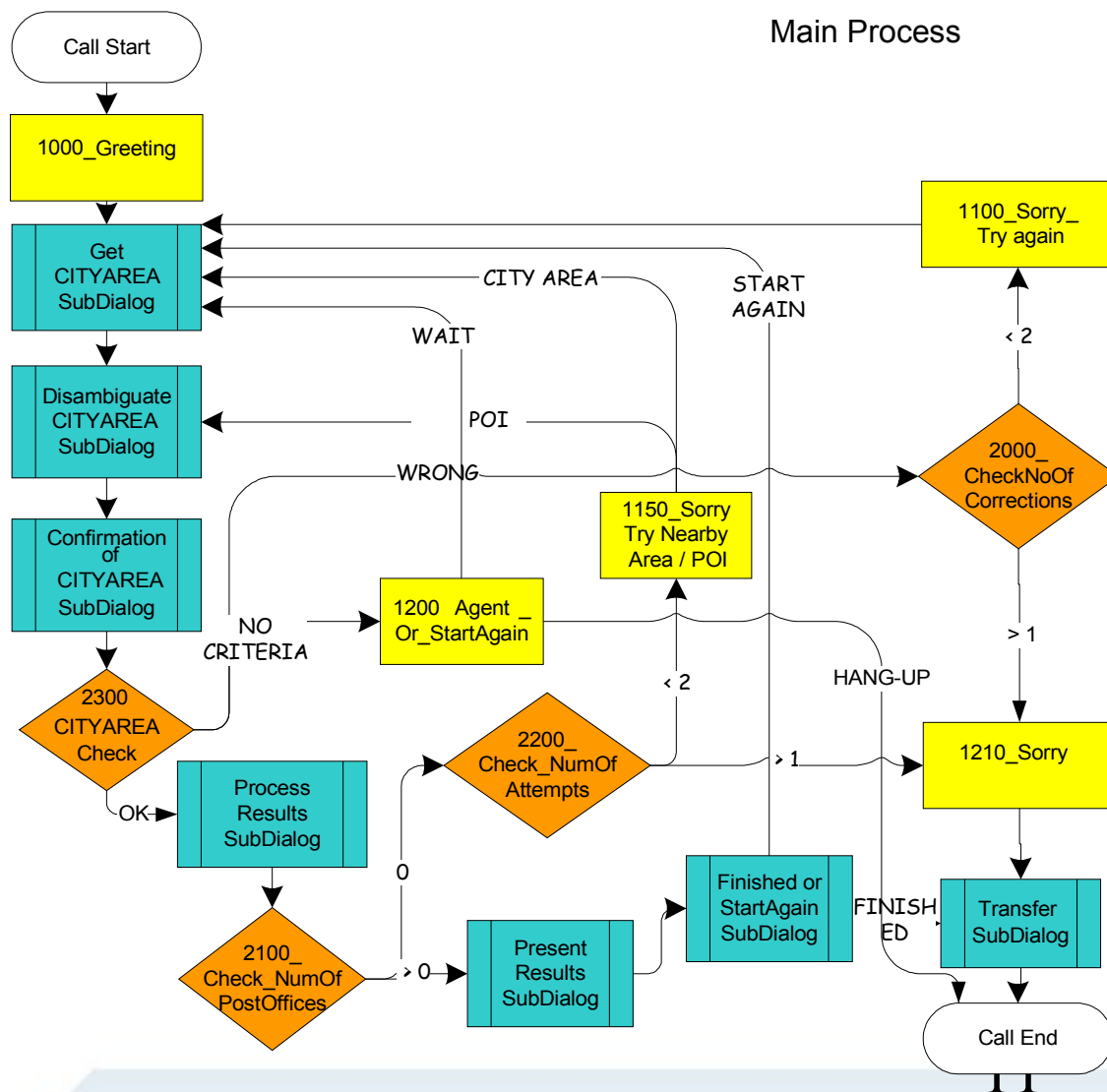
High-Level call flow	<i>Abstract</i> General functionality, business logic, basic tasks	Business, Sales Project managers
Macro- call flow	<i>Detailed</i> Processes, interactions among modules, Interactions with DB	IT managers, Call Centre Managers
Micro- call flow	<i>Very detailed</i> System prompts, Error handling, Grammar design, References to connecting modules	Application Developers, VUI designers, DB specialists

TOP-DOWN approach

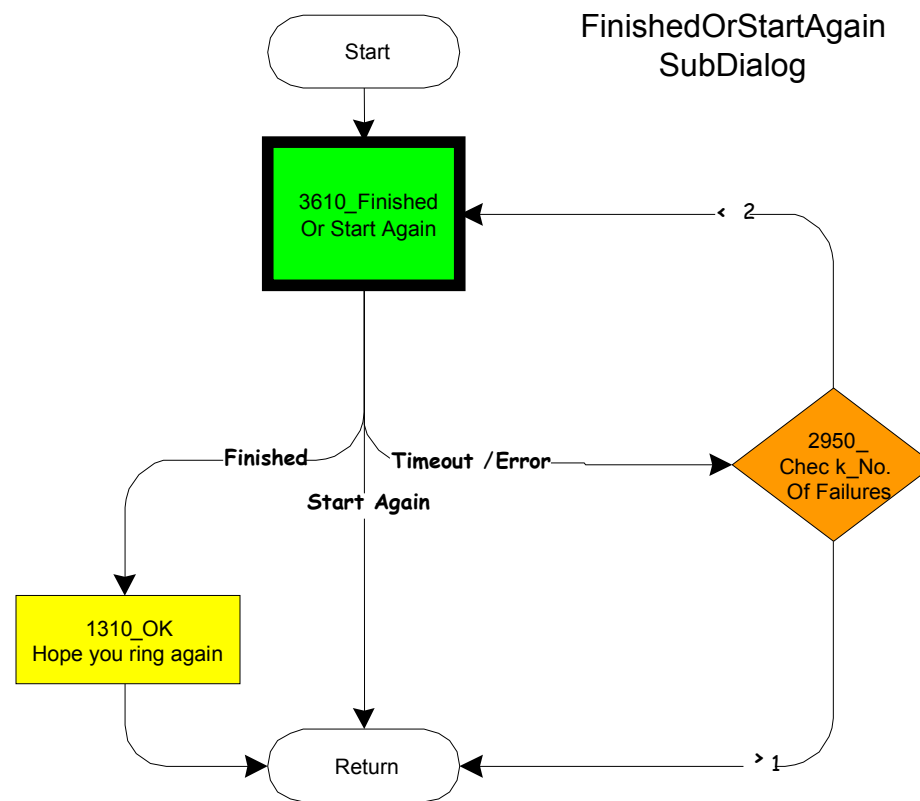
High-level call flow (abstract)



Macro-call flow (detailed)

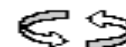


Micro-call flow (very detailed!)



Sub-dialog FS3000_FinishedOrStartAgain	
Entering from	Returning to
SR5000_PresentResults	Main Process
Developer Notes	

FS3610_Finished_Or_StartAgain



Interaction				
Entering from				
Error! Reference source not found.				
Prompts				
Type	Conditions and Wording			Msg ID
Initial	Sind Sie fertig oder soll ich noch einmal von vorn beginnen? Are you done or should I go back to the beginning?			I_01
Error 1/ Timeout 1	Sagen Sie bitte entweder „Neu starten“, wenn Sie noch einmal von vorn anfangen wollen, oder „Ich bin fertig“, wenn Sie mit den Informationen, die Sie bekommen haben, zufrieden sind. Please either say „Start again“ if you would like to go back to the beginning or „I’m done“ if you are satisfied with the information that you have already received.			R_01
Help	Wenn Sie noch einmal von vorn anfangen möchten, sagen Sie bitte „Neu starten“. Wenn Sie mit den Informationen fertig sind, sagen Sie einfach „Ich bin fertig“. If you would like to start from the beginning, please say „Start again“. If you are done with your search, just say „I’m done“.			H_01
Option	Vocabulary	DTMF	Conditions-Actions	Confirm?
Done	[Ich bin] fertig Das war alles [danke] Das genügt [danke] [no thanks] I'm done Done Finished [No] I'm finished that was it [thanks]	0	Go to FS1310_OK_Hope_I_Helped	Never
Start Again	Neu starten Von vorn anfangen Von vorn beginnen [Noch einmal] von vorn [bitte] Start again [Go] back to the beginning [Go] back to the start [Start] from the beginning		Go back to GC1000_GetCITYAREA	Never
Confirmation Prompts				
Option	Wording			Msg ID
Global Overrides				
Developer Notes				

STANDARDISE Project Communication!

- Involve the customer early on in the design
 - Design Workshops
 - Example dialogues showing all case scenarios
 - **BOTTOM-UP approach**
- Intertwine VUI design with implementation
 - Proof of concept
 - Design and test

Standard SPEECH PROJECT CYCLE

- Request for Proposal (Customer) -> **SOW** (Pre-sales)
- Discovery Workshop (Pre-Sales+PS+Customer)
-> **Requirements Specification** (PS)
- After review, **VUI Design & Persona Proposal** (VUI Designer)
- After approval, **Functional Design Specification** (VUI Designer, Architect)

Official Sign-off (Customer)

- **Prototype Development** (VUI Designer, System Architect, Application Developer)
- WOZ testing / Usability Testing (VUI Designer, Customer)
- **Detailed Application Design** (VUI Designer, System Architect)

Official Sign-off (Customer)

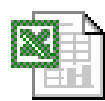
- **Implementation** (Application Developer)
- **FAT testing** (Testers)
- **Installation**
- CAT testing (Customer) / UAT testing (End-Customer)
- **Tuning** (VUI Designer, System Architect, Application Developer)



spec.doc



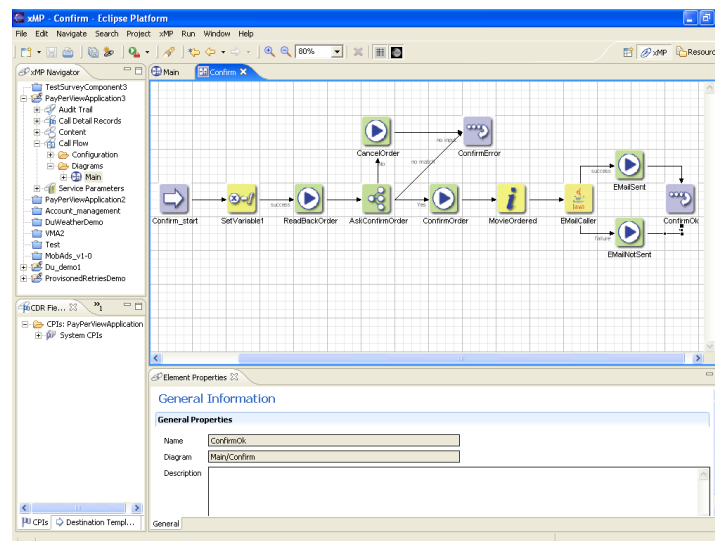
spec.vsd



spec.xls



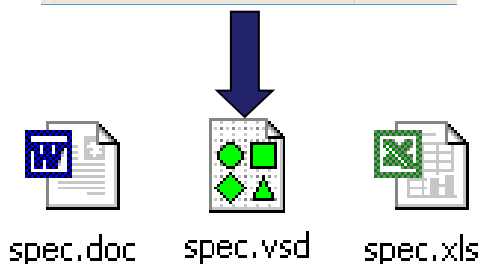
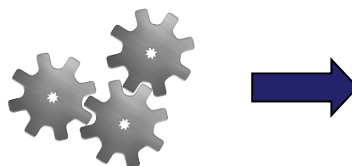
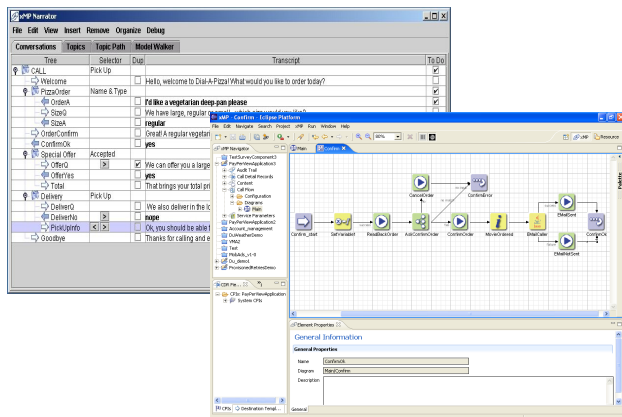
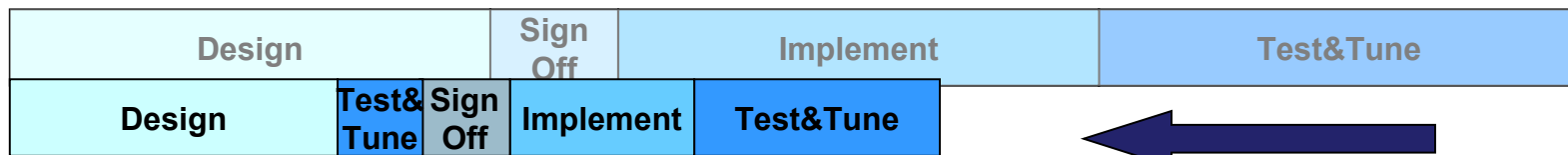
(FILE) Sign right here?



STANDARDISE Project Communication!

- Involve the customer early on in the design
 - Design Workshops
 - Example dialogues showing all case scenarios
 - **BOTTOM-UP approach**
- Intertwine VUI design with implementation
 - Proof of concept
 - Design and test

STANDARDISE Translation from Specs to Design!



(FILE) Sign right here?

Standardise Translation from Specs to Design

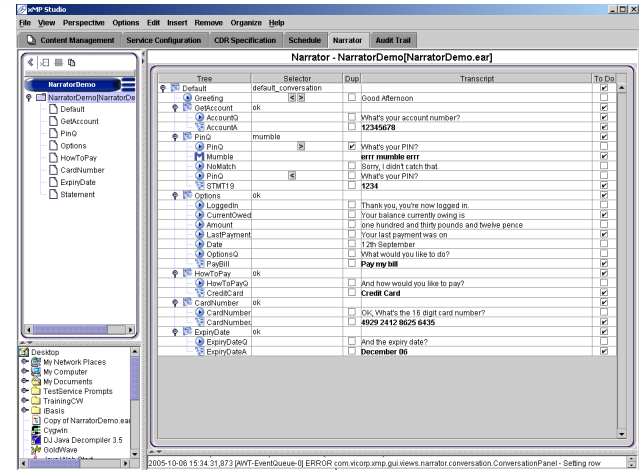


Customer Review

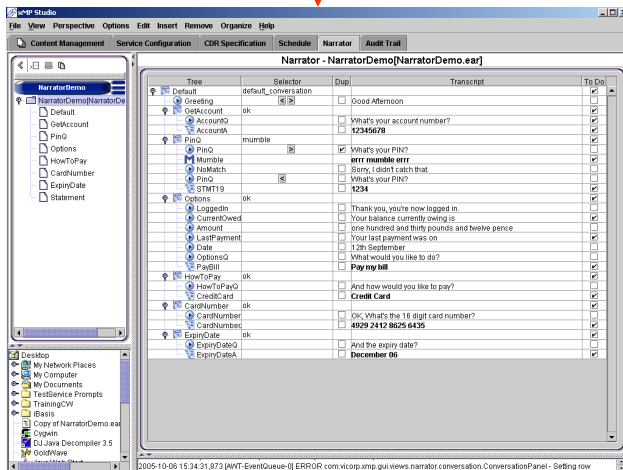


Dialogue Capture

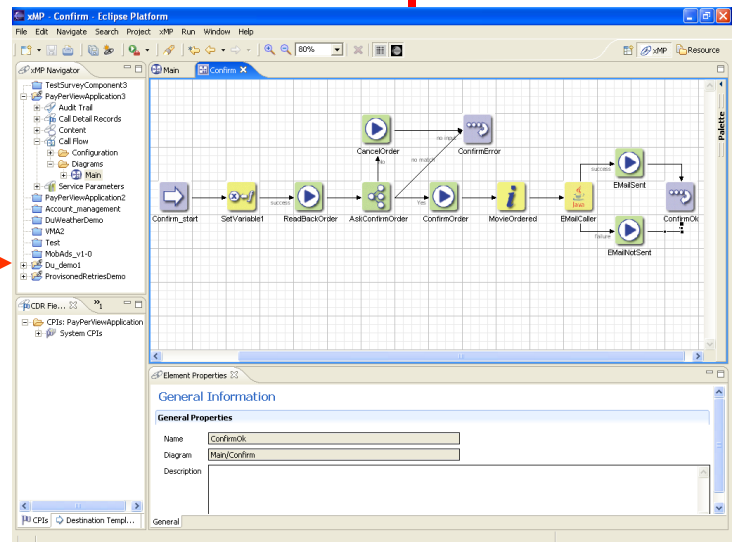
Requirements Capture



Back into Dialogue Capture



Call Flow



The way forward: **Collaborative Design!**

rather than insular and cryptic design

Design and Test together with the customer

(Proof-of-concept)

- Clarity, lack of ambiguity → confidence, consent
- Fewer misunderstandings
- Any drastic changes limited to
 - BEFORE full-length official and signed-off documentation
 - BEFORE prototype deployment
- minimisation of change requests hindering project sign-off
- No accusations that what was delivered is not what was signed-off

→ SHORTER SPEECH PROJECT LIFECYCLES!!

New School:

VUI DESIGN-cum-IMPLEMENTATION!

– Design and Implement concurrently

- Better Coverage of functionality
- Smooth transition from Specs to design to development
- Congruence between call flow in spec and in SDK
- Incremental and iterative System testing from the start
- Automatic generation of test cases

-- Document different level of detail for different people

- Better code maintenance and adaptation post-project
- Re-usability of design concepts and code

→ SHORTER SPEECH PROJECT LIFECYCLES!!