SESSION E-COST

Sizing and Costing of Database Applications

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Visual FoxPro™ Konferenz 97

Session Goals

- The need for sizing and costing
- A description of Function Point Analysis
- An alternative to Function Point Analysis: Action Point Counting

Who...

- Independent Xbase Developer since ‘83
- Hentzenwerke Corp - Current Projects
- Four Books, including DevGuide ‘97
- Editor of FoxTalk
- Wonderful Wife & 3 Kids (so far)

Session Requirements

- Programming Experience Not Required
- Corporate or Independent

The Need for Sizing and Costing

- Customers need to budget
- Developers need to budget
- The relationship between size and cost

Estimating Methods

- Why Estimates?
- Method 1: Guessing Randomly
- Method 2: SWAG
- Method 3: Price/Page
- Method 4: How much do you have?
- Method 5: Double & Increment

Cost vs. Price

- Looking at Custom Software as a Widget
- Cost of a Widget
- Price of a Widget
- Difference (IANAA)
- The Purpose of Sizing and Costing is to Not Lose Money!

Scenario

- Sales Call
- Engagement Letter
- Functional Specification
- Costing is the Final Step in the FS Process

Sizing: The General Idea

- A synthetic unit of measurement
- Applicable across various applications
- Independent of the developer
- Independent of the language
- Units are delivered to customer
- Developer determines cost of a unit

Function Point Analysis

- Function Points: a synthetic unit of measurement
- Delivery of function points determines final price
- Buyer determines number of function points desired
- Cost to deliver a function point is up to the developer

Why An Alternative to Function Point Analysis?

- Sophisticated & complex
- Requires training
- Doesn’t scale to smaller applications

An Alternative to Function Point Analysis

- FPA Lite: Action Points
- Counting “Things”
- Weighting “Things”
- Multiply # of “Things” * Cost/”Thing”
- Price > Cost

Benefits to Action Point Counting

- Easy to implement
- Can be implemented by low cost people
- Can be easily customized
- Potential for automation

Things to Count

- Forms
- Processes
- Output
- Foundation
- N.E.C.

Things to Count - Forms

- Dumb Objects
- Action Objects
- Data Objects
- Rules
- Multipliers (not Weights)

Things to Count - Forms

Let's See An Example!

VFP: COMP.SCX

VFP: JOBTO.SCX

VFP: R1EX2SER.SCX

VFP: REMASTER.SCX

Things to Count - Processes

- What is a Process?
- Match
- Lookup
- Insert
- Create/Delete Table
- Assign
- Write an Exception

Things to Count - Processes

Let's See An Example!

VFP: R1EX2SER.SCX

Things to Count - Reports

- Dumb Objects
- Fields
- Calculated Fields
- Groups/Orders
- Group Calculations
- Rules
- Foxfire! Objects

Things to Count - Reports

Let’s See An Example!

VFP: REMASTER.SCX

Things to Count - Foundation

- Foundation (Setup)
- Menu/Security
- Data Dictionary
- Help
- Testing Data

Things to Count - Foundation

Let’s See An Example!

AP.XLS

Things to Count - NEC

- E.G. OLE Automation Server, OCXs
- Identify Types of “Things”
- Weight Things
- Count Things
- R&D
- Gut Feel

Cost/Action Point - I

- An Action Point is Uniform (e.g. Sq.Ft.)
- We Use History of Existing Projects
- We Have Tracked Hours/Project Closely!

Cost/Action Point - II

- Calculate Total Actual Time for a Project
- Calculate # of Action Points for a Project
- Multiply by Rate/Hour for the Developer on the Project
- Cost/Action Point = Total Time * Rate/Hour / # of Action Points

Developer Skill Level

- Cost/Action Point is Uniform Across All Developers
- Developer Skill Level Determines # of Action Points Produced Per Hour
- # of APs Produced Per Hour Determines Developer's New Rate
- Developer's Rates Can Reflect True Variations in Productivity

If You Don’t Have History

- Why Not (It’s OK!)
- Getting Started with Metrics
- Gather Something!
- Do It All the Time!

Getting Started with History

- Gathering Direct vs. Indirect Time
- Our Breakdown:
  - Customer
  - Project
  - Module
  - Task

Determining Price

- Can’t Make Up Cost>Price with Volume
- What is Their Pain?
- What is the Value?

Dealing With Customers

- Selling Advantage of Fixed Price
- “Not to Exceed”
- Changes

Getting Paid

- Break Project Down to Deliverable Modules
- Deliver and Get Acceptance
- Size of Modules

More Info

- Samples on www.hentzenwerke.com
- Books - MSPress, DevGuide