

Early Lifecycle Estimating for Agile Projects

Raymond Boehm
Software Composition Technologies
96 Reids Hill Road
Aberdeen, NJ 07747-1883
USA

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What and Why

- What is early lifecycle estimating?
 - Before Developers or Requirements are Available.
 - Part of or Follow the Feasibility Study.
- Why is it desirable for agile projects?
 - Agile Projects Must Coordinate with Other Projects, so Schedules Must be Estimated.
 - Staffing Levels Should be Optimized.
- Why is it different than traditional estimating?
 - Lack of Traditional Development Documentation

Overview

ELFE Methodology Estimates Size

Elf Poker Creates
User Stories

ELFE Processes
User Stories

COCOMO Suite for Time & Effort

COCOMO II Must
Be Run

CORADMO
Produces Estimate

The ELFE Methodology

- Early Lifecycle Functionality Estimating
- Estimates Before Counting Possible
- Specifically Designed for Agile Projects
- Can be Used for Traditional Projects
- Two Components of ELFE:
 - The ELFE Process Estimates Based on Initial User Stories
 - Elf Poker is Collaborative Technique Used If Stories Unavailable

The ELFE Process

Draft Scope and Boundary & Identify Locations

Identify Roles & Transactions

Identify Data

Recognize File Maintenance

Check Functional Ratios

Complete Projection

Identifying Roles and Transactions

- Identify Roles
 - Logically Distinct Types of People
 - Examples Might Be Clerical Workers, Supervisors and Executives
- Identify Transactions
 - Based on Active Verbs in Stories
 - Transaction Keywords with Type and Complexity
 - Component Keywords with Expected and Maximum Size
 - Elementary Processes Identified If No Keywords

Elf Poker

- Between 2 and 10 Players (Users)
- Three or Four Sessions
- Each Session Between 1 and 2 Hours
- First Session has Rounds for Locations, Roles and Stories
- Second through Last have Story Rounds
- Last Session has VAF and Scope Creep Rounds



What Makes ELFE Different?

- ELFE Process
 - Designed for Agile Projects
 - Keywords Were Specifically Researched for ELFE
 - Charismatek Keywords Classify Elementary Processes
 - ELFE Keywords May Correspond to Components
 - Designed for Use with Tools like FPW and Scope
 - Technique Uses Elf Poker for Data Capture
- Elf Poker vs. Estimating Poker
 - Players are Users, Not Developers
 - Result is Initial Stories that Can Be Estimated

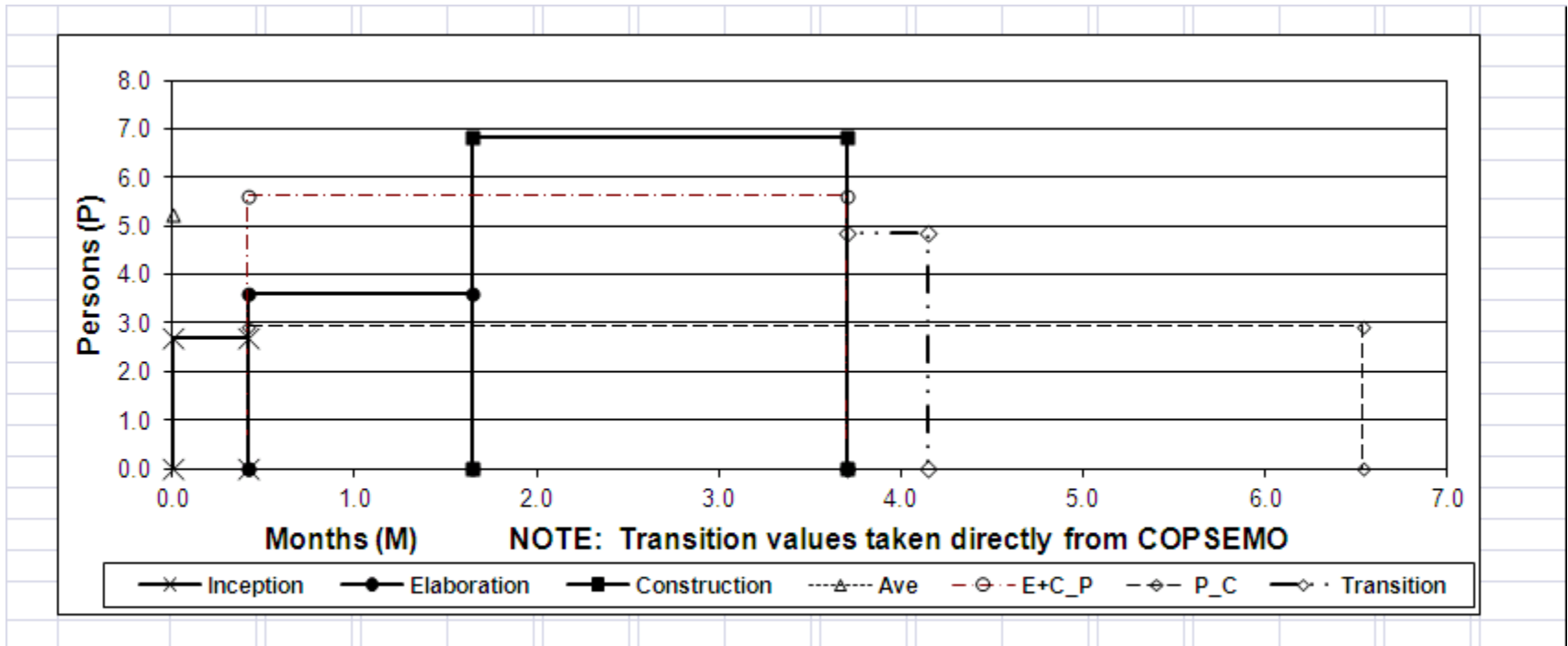
The COCOMO Suite

- Constructive Cost Model (COCOMO) II
 - Predicts Effort for Traditionally Planned Projects
 - Must be Run in Order to Run CORADMO
- Constructive Phase Schedule and Effort Model (COPSEMO) is referenced but not really used by the estimator.
- Constructive Rapid Application Development Model (CORADMO) Post-processes COCOMO Output into a Compressed Schedule
- The COCOMO Suite has Other Components, Including AgileCOCOMO II.

COCOMO II Parameters

- Primary Input is Size (in FPs) and Programming Language
- Five scaling factors:
 - Architecture and known Risk Resolution – Average
 - Others Set As Described in Model
- 17 Cost Drivers:
 - Documentation Match to Lifecycle Needs – Very Low
 - Personnel Cost Drivers – High
 - Others Set As Described in Model

The CORADMO Run



Post-processing CORADMO Results

- CORADMO Output Must Be Transformed Into Sprints and Team Size.
- Duration of Sprints Varies Between Organizations
- Using Example On Previous Slide:
 - Inception, Elaboration and Construction Take 3.7 months or about 16 weeks.
 - Team Size Varies, but Averages About 6 People.
 - Assuming 2 Week Sprints Would Plan for 8 Sprints.

Resources

- Raymond Boehm
 - 732-566-2892 or rayboehm@softcomptech.com
 - www.AgileEstimator.com – Blog with An Approach to Early Lifecycle Estimating for Agile Projects
- Barry Boehm's Software Cost Estimation With COCOMO II – Covers COCOMO and CORADMO
- Mike Cohn's Agile Estimating and Planning – Covers User Stories and Agile Project Planning