

DCG WEBINAR

# IFPUG 4.3 – What You Need to Know!

---

Sheila P. Dennis, CFPS

[sdennis@davidconsultinggroup.com](mailto:sdennis@davidconsultinggroup.com)

# Presentation Topics

---

- **Let's Talk Function Points**
- What Did They Do to the Counting Practices Manual (CPM)?
- 4.3 Rule Changes and Interpretations
- How Does it Affect Me?

# Let's Talk Function Points!

---

- Developed in the 1970's by IBM
- Governed by International Function Point Users Group for over 25 years
- IFPUG Counting Practices Committee (CPC) maintains the Counting Practice Manual
- Industry standard for functional sizing

# Let's Talk Function Points!

---

- Flexibility
- Usability
- Consistency
- Compliancy

# Let's Talk Function Points - Flexibility

---

- Flexibility

- Multiple Platforms, Technologies, Solutions
  - Online, Batch, Real-Time, Remote
  - Client Server, Web, Mainframe, Data Warehouse
  - ERP Solutions (SAP, Siebel, CRM)
  - All languages
- Application Development Types
  - “Home Grown”, Vendor Packages, Customizations
- Application Development Methods
  - Agile, RAD, JAD, UML, Waterfall, Mixed SDLC
- Multiple Types of Counts (Functional Size Measures)
  - Application Baseline counts
  - Development and Enhancement project counts

# Let's Talk Function Points -- Usability

---

- **Performance Metrics.**
  - Productivity (delivery rate – hours/fps delivered)
  - Quality (defect rate = defects/fps delivered)
  - Schedule (time to market)
  - Cost (\$\$/function point delivered)
- **Benchmarking**
  - Measure IT performance internally and externally
  - Opportunities for improvement
  - Substantiate the value of IT
  - Prove IT return on investment.
- **Outsourcing Service Level Agreements**
  - Comparative contractual basis
    - Multiple vendors
    - Internal vs. external development teams
  - Performance standards for outsourcing requirements

# Let's Talk Function Points – Consistency and Compliancy

---

- Consistency
  - Governed by a standard set of rules, processes and guidelines as defined by the International Function Point Users Group (IFPUG)
  - Two CFPS will generally be within + or – 10%; organizationally can be even better
- Compliancy
  - Widely accepted as industry standard for *functional* sizing
  - CMMI Compliant
  - ISO Compliant
  - Quality Control, Quality Assurance processes easy to implement for auditing purposes

# Presentation Topics

---

- Let's Talk Function Points
- **What Did They Do to the Counting Practices Manual (CPM)?**
- 4.3 Rule Changes and Interpretations
- How Does it Affect Me?

# IFPUG Changes to the CPM

---

CPM 4.2 was revised into 4.3, in order to:

- Further clarify the existing rules
- Delete redundancies
- Be more succinct and less ambiguous
- Provide more examples and clarification
- Align with the ISO standards

# IFPUG Changes to the CPM

---

- The structure and wording of the CPM have changed significantly
- Different look and feel to the structure
- The counting process has not changed significantly
- The results, based upon the “clarified” rules, may or may not have changed, based upon the past interpretation of the rules in your environment .



# IFPUG Changes to the CPM

---

The restructure of the 4.2 CPM (4 parts) into the 4.3 version (5 parts) resulted in a publication which is now 100% ISO compliant. The 5 parts are --

- **Part 1 (New) Process, Rules and Definitions**
- **Part 2 (former 4.2 Part 1): The Bridge - Applying the IFPUG Functional Size Measure (FSM) Method**
- **Part 3 (former 4.2 part 2): Counting Practices**
- **Part 4 (former 4.2 part 3): Examples**
- **Part 5 (former part 4): Appendices and Glossary**

# IFPUG Changes to the CPM 4.3

- **Part 1 (New) Process, Rules and Definitions**  **(ISO FSM Standard)**
  - **Part 2 (former 4.2 Part 1): The Bridge - Applying the IFPUG Functional Size Measure (FSM) Method**
  - **Part 3 (former 4.2 part 2): Counting Practices**
  - **Part 4 (former 4.2 part 3): Examples**
  - **Part 5 (former part 4): Appendices and Glossary**
-  **Implementation Guide:**  
**Applies the FSM to the “familiarity” of the CPM**

# Part 1. Process, Rules and Definitions. (New)

---

- 4.2 Process and Rules were split between 4.3 - Parts 1 and 2
- ISO Standard (IFPUG Functional Size Measure - FSM)
- New definitions were added for selective terms, e.g. Self-contained, Consistent state, Sorting
- ISO FSM does not use General Systems Characteristics (GSCs)
- General System Characteristics (GSCs) and the Value Adjustment Factor (VAF) were not included in this section
- Transaction rules have been streamlined, with little or no redundancy
- Common set of Data Element Type (DET) and Files Type Referenced (FTR) rules for all transactions
- Uniqueness Test (i.e., same DETs, FTRs & Processing Logic) is stated once

***Note: In general, while being modified in wording and format, there is little or no difference in counting results.***

## Part 2: The Bridge - Applying the IFPUG FSM Method

---

- Former 4.2 Part 1
- Balance of information from 4.2 Process and Rules
- First step changed in counting process: “Gather Documentation”
- “Identify Counting Scope and Application Boundary” was changed to “Determine Counting Scope and Boundary and Identify Functional User Requirements”
- Term “unadjusted function points” replaced with “functional size”
- Redefined: Development, enhancement, and application function point
- Example: “Count...” as in “Count Transactional Functions”, changed to “Measure...” as in “Measure Transactional Functions”
- Any discussion of “unadjusted” or “adjusted” to Appendix C
- Entire chapter on Value Adjustment Factor Moved to Appendix C
- Moved formulas to Appendix C
- Extensive wording and actions changed to be consistent with FSM
- Discussion of Enhancement Projects were moved to the Enhancement Chapter

*Note: In general, there are no difference in counting practices as a result of these changes. The GSCs are optional.*

## Part 3 : Counting Practices

---

- Former 4.2 Part 2
- Wording and actions were changed to be consistent with FSM.
- Additional guidance and examples for enhancements
- Addition of a chapter for guidance in counting conversion activity (although the counting rules have always allowed for counting conversion activity).
- Added ISO definition of Functional Size
- Updated the definition of Functional User Requirements
- Replacement of “quality requirements” and “technical requirements” with the ISO term “non-functional requirements”
- Moved evaluation of code data to prevent premature elimination of items that may look like code data, but are in fact, are not

*Note: In general, there is no difference in counting practice as a result of these changes.*

# Part 4 Examples & Part 5 Appendices and Glossary

---

## Part 4 Examples

- Former 4.2 part 3
- The wording and format were changed to be consistent with the FSM.
- Additional clarifications and examples have been provided in this section.

## Part 5 Appendices and Glossary

- Former Part 4
- Expanded glossary
  - Numerous new terms have been added
  - Some terms have been changed to align with the FSM
- GSCs, VAF and Restated formulas

*Note: In general, there is no difference in counting practice as a result of these changes.*

# Presentation Topics

---

- Let's Talk Function Points
- What *Did* They Do to the Counting Practices Manual (CPM)?
- **4.3 Rule Changes and Interpretations**
- How Does it Affect Me?

**Let's explore two excerpts of "Further clarify the existing rules" ....**

# Clarifying existing rules: Excerpt 1

---

To identify each elementary process, the following activities shall be performed..

a) Compose and/or decompose the functional user requirements into the smallest unit of activity, which satisfies all of the following:

- 1) is meaningful to the user,
- 2) constitutes a complete transaction,**
- 3) is self-contained,
- 4) leaves the business of the application being counted in a consistent state

***NOTE: Item 2) is not a change, but rather a refinement to increase the specificity to promote consistent interpretation.***

## Clarifying existing rules: Excerpt 2

---

To determine unique elementary processes, the following activities shall be performed..

- a) When compared to an Elementary Process (EP) already identified, count two similar EPs as the same Elementary Process if they:
- 1) require the same set of DETs, and
  - 2) require the same set of FTRs, and
  - 3) require the same set of processing logic to complete the elementary process

***NOTE 2: One elementary process may include minor variations in DETs or FTRs as well as multiple alternatives, variations or occurrences of processing logic.***

## Clarifying existing rules: Example 1

---

**EXAMPLE:** When an EP to Add Employee has been identified, it is not divided into two EPs to account for the fact that an employee may or may not have dependents. The EP is still Add Employee, and there is variation in the processing logic and DETs to account for dependents.

***DCG Note: Whether the wording for the rules has changed -- or not --, the addition of “notes” and examples determines the interpretation of the rules and should not be ignored.***

## Clarifying existing rules: Excerpt 2

---

- b) Do not split an EP with multiple forms of processing logic into multiple EPs

***NOTE 3: An elementary process that accepts and validates data from the user, reads and filters data from an ILF and sorts and presents the results back to the user cannot be split into multiple elementary processes.***

# Impact Study

---

- 44 CFPS volunteers
- Case study using both CPM 4.2.1 and CPM 4.3
- Over 100 projects previously counted under CPM 4.2.1
- Development, application and enhancement
- Results were the same for both methods
- Conversion factor was determined to be 1.0 (i.e., no difference)

# Presentation Topics

---

- Let's Talk Function Points
- What *Did* They Do to the Counting Practices Manual (CPM)?
- **4.3 Counting Rule Changes and Interpretations**
- **How Does it Affect Me?**

## What to Watch For.....

---

- More unified, consistent, and usable CPM
- Read the CPM carefully to get the full intent
- From an IFPUG perspective, there is no difference in the counting practices from a results perspective
- Review and update any local training materials to accommodate extensive wording changes
- Review and update any local counting practices
- Review any client-supplier rule interpretations to insure consistency and agreement
- CFPS test will change! And will be effective June 2010!

## References

---

- Dennis, Sheila P. "*Evolution of IFPUG Function Points – Now at 4.3!*", January 2010.
- Function Point Counting Practices Manual - Release 4.3*, The International Function Point Users Group. 2009.
- Timp, Adri. "The New CPM – 4.3", International Function Point Users Group, ISMA Conference, September 2009.

# Contact Information

---

- Websites
  - [www.davidconsultinggroup.com](http://www.davidconsultinggroup.com)
  - [www.ifpug.org](http://www.ifpug.org)
- For further information....
  - [sdennis@davidconsultinggroup.com](mailto:sdennis@davidconsultinggroup.com)
  - [ttimbol@davidconsultinggroup.com](mailto:ttimbol@davidconsultinggroup.com)
  - [tcagley@davidconsultinggroup.com](mailto:tcagley@davidconsultinggroup.com)