IFPUG
INTERNATIONAL FUNCTION POINT USERS GROUP
www.ifpug.org
MetricViews
August 2012 • Vol. 6 • Issue 2

Inside...

The IFPUG Book of Knowledge 1
Featured Articles:
How Big is My Cloud? 4
Super Files 8
The Next Frontier: Measuring and Evaluating the Non-Functional Productivity 10
Special Recognition Awards 15
Message from the President 1
Message from the Editor 2
Committee Reports: 7
Certification Committee
Functional Sizing Standards Committee
Membership Committee
Upcoming News:
IFPUG Announces ISMA 7 Conference Featured Speakers 14
Board of Directors & Committee Members 16
New and Extended CFPS 17
Publication Order Info 19

THE IFPUG BOOK OF KNOWLEDGE

Yes – it has finally been assembled. IFPUG and a host of experienced measurement practitioners within IFPUG have combined to produce a comprehensive guide to the potential of measurement. This is a valuable source of knowledge that will endure.

What is in it? How do you get it? You will find the answers deeper in *MetricsViews*.

We are also celebrating 20 continuous years of IFPUG Certification. Not many of us have remained actively certified for that time, but there are a few creeping up on the milestone. Certification has been a backbone of IFPUG over this period, and the Certification Committee has more plans in the pipeline. Find out who is doing what in all the Committee Reports.

And articles – yes, we have articles.

Roger Heller, of QPMG, discusses Cloud applications and how we need to think about them to enable effective and practical measurement. In the complete article available at the IFPUG website, he demonstrates practical application of this approach.

Luigi Buglione looks deeper into the concepts of functional and non-functional requirements differentiation and measurement and demonstrates how SNAP can be applied.

And Chuck Wesolowski examines the issue of those very very BIG files. He looks at how they impact measurement and suggests approaches for dealing with them.

Some News, some Food for Thought and some Information on what's up now – this is your *MetricsViews*.

Message from the President

Joe Schofield

In this issue.....

A few weeks ago Connie Holden, our Executive Director at CMA, asked me to pen a message for the upcoming *MetricViews*. What? Another one? Didn't we just release one of these? Aren't we still working on items from the last time?

Time out. Pause. Take a breath; and another. Now . . . that's better. Seems life is going way too fast and I myself am guilty of overlooking much of what's been achieved just recently. Since November when I wrote the last of these columns, our IFPUG community has accomplished (arguably) an unprecedented amount of activity. Here's a small, non-exhaustive, unordered sample:

The new *IFPUG Guide to IT and Software Measurement* was released thanks to so many of your efforts in authoring, editing, and preparing those 43 chapters. I believe its content will contribute to our measurement community for years to come.

The new membership self-serve application, Avectra, wasn't even started until late last year; it was "released" in May. Now our membership can maintain their own contact information (making member communication and our snail mailings more effective), and memberships and resources can be procured electronically. (I know, I have a new membership too.) MemberFuse, a social networking application, was also added and deployed late in the spring.

(continued on page 3)

From the Editor's Desk

Paul Radford

Metrics has entered challenging times.

We "true believers" find it hard to understand how the core IT world can afford to ignore us. We know we can provide invaluable information and support. We see millions upon millions wasted because of a failure to properly estimate and scope major projects – yet still "they" fail to see the light.

The IFPUG book is a great step in opening the window of our world to those who don't even know it exists, much less what they can find there. But it is just a start. As Roger Heller has outlined for Cloud Applications in this edition, we must continue to demonstrate how this technique is directly relevant to the work that is done today.

To use a much misused term, we must demonstrate our agility. The world loves agile – but if you are going to choose chunks of functionality and then "go for it," best to spend another ten minutes assessing the size of that bite before you begin.

Measurement can be done according to need, with a lightness of touch appropriate to the circumstance. It is up to us to re-invigorate and re-energise measurement concepts so they can gain the attention and relevance they deserve.

Paul Radford
Communications & Marketing

(President's Message, continued from page 1)

A new IFPUG website was created and released to refresh the "look and feel" of the previous site and to supplement the aspects of Avectra that went beyond membership services. This set of tasks also included a new web hosting site, coordinated transition of information and records, and simplified web architecture.

A new committee structure was implemented to align critical resources with our future and our priorities. One of the purposes of this re-alignment was to resource work and focus on fewer critical opportunities.

Two new certifications, the Certified Function Point Practitioner and the CFPS Fellow, were approved and implemented.

Phoenix was selected for ISMA^{7} in late October. We've been told for 10 years to move the conference away from early September; we finally got it. The high temperature that time of year is about 82 if you average October and November. We have some dynamic industry leaders and experts joining us as featured speakers this year.

Tom Cagley re-joined the Board as Secretary. Debbie Maschino assumed the role of Treasurer and is looking for anyone with experience in printing money to balance a budget.

With change has come some pain; some of which we've tried to mitigate, some which we are still working. These (still under re-construction) include offering our sponsors at least equivalent or better real estate and visibility, and re-enabling our bulletin board capabilities.

Within the past 16 months, two examinees scored 100 percent on the CFPS exam. I can't release their names without permission but one was from Europe and one from Asia. I don't think this constitutes a statistical trend but I am told these are rare occurrences and as measurement gurus, I thought you'd like to know. Congratulations to those two members and all of those who have recently passed the exam and are recognized in this issue.

Before everyone attempts to score 100 percent of the CFPS exam though, I am reminded of how measurements do *drive* behavior especially when incented. In the book *Hard Facts, Dangerous Half-Truths, and Total Nonsense*, the authors describe an incentive system for refuse (trash) collectors in my home town of Albuquerque, New Mexico. Millions of dollars in bonuses were paid over a six year period for truck drivers to complete their routes in a timely fashion. Unfortunately, at the same time, preventable accidents increased among those drivers, trucks were being filled beyond accepted capacity, and some trash was left in the streets after falling out of the trucks. I shared the follow-up to this story with our colleagues in Brazil in August at the 3rd Software Measurements and Analysis Conference. As a reminder, the introduction of unintended consequences is directly relevant to our own IT measurement programs. I recommend you look at this book (only after reading the latest IFPUG book.)

I look forward to seeing many of you over the coming months. Be involved. Engage the Board, Committee Chairs and members, and your peers—help us invent our future.

Thanks to all of you that make IFPUG what it is today and what it can be tomorrow.

Take care,
Joe Schofield
President

CURRENT CONTACT INFORMATION?

To ensure you won't miss out on any IFPUG communications, please log in to your profile on the updated IFPUG Members Services Area and update your information.
Go to www.ifpug.org
Send emails to ifpug@ifpug.org, call 609-799-4900 or fax 609-799-7032
Write to: IFPUG, 191 Clarksville Road, Princeton Junction, NJ 08550

MetricViews
is published twice a year by the International Function Point Users Group (IFPUG), headquartered in Princeton Junction, New Jersey, U.S.A.

MetricViews **July 2012**

Editor
Paul Radford

IFPUG Board of Directors

President
Joe Schofield

Vice President
Kristе Lawrence

Secretary and Director of Communications & Marketing
Tom Cagley

Treasurer
Debra Maschino

Immediate Past President
Bruce Rogora

Director of Counting Standards
Lori Holmes

Director of Applied Programs
Christine Green

Director of International & Organizational Affairs
Mauricio Aguiar

Director of Education & Conference Services
Steve Woodward

IFPUG Office

Executive Director
Connie Holden

Views and opinions presented in MetricViews articles may not represent those of the International Function Point Users Group (IFPUG).

Please submit all articles, news releases and advertising to:

IFPUG/*MetricViews*
191 Clarksville Road
Princeton Junction, NJ 08550
609/ 799-4900
ifpug@ifpug.org
www.ifpug.org

How Big is My Cloud?

By Roger Heller

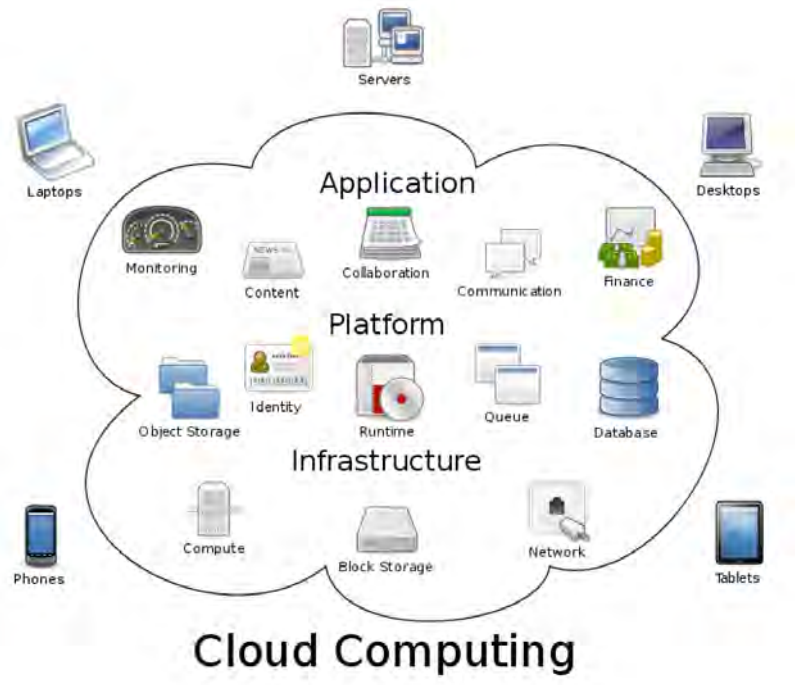
When cloud computing first came about I recall talking to a colleague and remarking that the cloud is just a repackaging of timeshare. We joked and praised large mainframe manufacturers for finding a way to repackage their systems into super servers to continue to draw in the big bucks. Well, that was a while back, and now, unbeknownst to me; I am hooked on the cloud. I realized that I get my music from the cloud, my books comes from the cloud, I rely on the cloud to get boarding passes for airplanes, I pay bills through the cloud, I play word games in the cloud with friends across the country and I even manage my recipes in the cloud. If I'm such a cloud user and a measurement professional, I should be able to figure out how to come up with pertinent measures that cloud developers and users can utilize to help them manage their development efforts. This article is my attempt at providing simple powerful techniques that can be used to establish the size of cloud applications.

What to Measure?

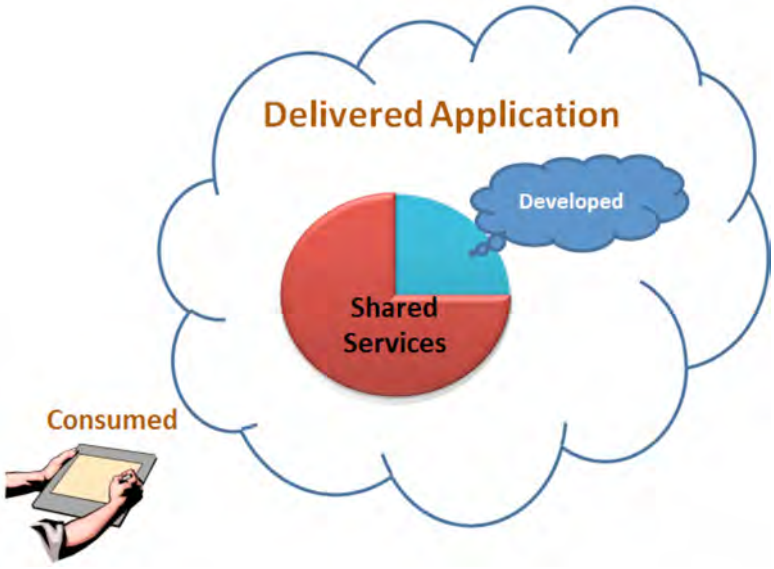
The first big challenge is to figure out what to measure. There are many moving parts to the cloud, as depicted by the diagram[1] below, and a cloud developer only has control over a small subset of these parts at any point in time.

Appropriate size measures can be developed for each piece of the cloud, but it is important to only measure what you can control. For the purposes of this article the scope of the measures to be discussed include the Cloud Applications and the various methods that enable users to access the applications.

From one perspective, there are at least three aspects of a cloud application that need to be considered for sizing. These are: Developed Functionality; Shared Services (i.e. messaging, collaboration, email, VoIP); and Consumed Functionality (functions actually used by an end user).



[1] This image was obtained from Wikimedia Commons, authored by Sam Johnston on July 24, 2011.



If the objective is to establish metrics on productivity, cost, quality and schedule as it relates to custom development, then the focus should be on the Developed Functionality. In this case, the size will only reflect those functions that are developed from scratch or customized/enhanced from existing functions. If the focus is on establishing metrics on what is potentially delivered to a user of the cloud applications, then the focus should be on measuring both the Developed Functionality and that portion of Shared Services used by the application to deliver the functionality. In this case, the size would include all of the functions, including reusable or out-of-the-box functions that needed no customization to meet the functional needs. Having this size can provide insight into the total functionality being delivered to the end user, whether it is used or not. If the focus is on what the user actually uses of the Delivered Functionality then the measures should be aimed at what is consumed. Focusing on the Consumer Perspective can help to direct future development. One approach to developing software is to be of the opinion of "if we build it they will come"; another perspective can be "if they will use it I will build it." The truth lies somewhere in the middle and both perspectives need to be considered. So sizing a cloud application from a consumer's perspective can give developers an idea of what consumers use and what they want, which can influence future development requirements, estimates and costs. Measuring each or all of these depends on the purpose behind the measurements.

What to Include and What to Exclude

The first step in measuring anything is to define where to begin and where to end. When measuring an application's functional size the best way to determine the beginning and end is to pick a point of view. If the point of view is to measure a news application then the functions that are made available to the various individuals that interact with the application to provide and consume content should be considered. If the point of view is to measure a shared word game hosted in the cloud, then the functions used by the players and the functions required to support play should be considered. If you are only interested in measuring an enhancement effort rather than a total development effort then the focus would be on those functions that have been modified as a result of the enhancement project. But the point of view would still be from a user's perspective (consumers and providers), focusing on those functions that are used in the application being measured.

Now that we have discussed what functions should be counted, the next challenge is to discuss when they should be considered. There are some schools of thought that say a function is a function no matter how or where it is accessed. For cloud applications, this simple view would make measuring a function easy. Just ignore all of the different platforms a user has (i.e. the various devices such as PCs, mobile phones, tablets used to access the cloud) and all of the unique development that has to take place to make each work properly and just identify a single function. But this approach is fraught with potential problems. It makes it nearly impossible to compare different development efforts where one effort may be to develop for a single platform while other development efforts may be for multiple platforms. It is very likely that the effort to develop a solution to run only on a PC is going to be less than that required to develop the solution to run on both a PC and a tablet, yet, taking the single function approach, the delivered functionality is viewed as identical. The resulting productivity, cost and quality metrics may be of little value to the organization.

The best way to avoid this dilemma is to consider, given some basic rules, that each platform is unique. With this approach, if a solution is available on multiple user devices then each should be considered to be a unique platform. For example, if a cloud application is only available on a mobile phone, then that would be the single platform and the functions would only be counted once. If, however, the application is developed for both a mobile phone and a PC, then it would be considered to have two platforms, where reasonable unique functions would be identified. If the application was enhanced at some point to also function with a tablet, then there would be three platforms and a third set of functions could be considered.

Of course there has to be some guidelines to control the number of platforms included in the scope, but they are simple. If the solution runs on

multiple platforms with no modifications or customizations to accommodate this capability then all platforms should be considered to be the same and the functions would only be considered once. The other guideline has to do with multiple similar platforms. In this case if the application runs on multiple mobile phones providing identical functionality and the only difference is the operating system utilized by the phone then all mobile phones are considered to be a single platform. The fact that the application has to be modified to run in different operating systems is considered to be technical adaptive maintenance and any effort associated with making it work should be tracked as maintenance, not development or enhancement effort.

Likely, there are individuals who will take the perspective that developing the software to run on multiple platforms is also technical adaptive maintenance and therefore all of them together should be viewed as a single solution. More often than not, in today's environment similar end user functionality is offered on different families of platforms (i.e. mobile phones versus PC's versus tablets). But often, the functions provided while similar, can vary from one family to another. In some cases the amount of data provided is different or the functions themselves are different. Therefore, the set of functions each platform family provides should be viewed as a unique solution.

To be clear, each situation needs to be evaluated on its own merit and if making an application available on multiple families of platforms is truly a technical port, with no impact on user functionality, then all of the devices should be viewed as a single platform. Whatever the ultimate decision, it should be clearly documented within the organization to ensure that the reasoning behind the measurement direction taken is understood and agreed to by all interested parties.

In the remainder of this paper Roger provides a practical example of applying the IFPUG sizing method to a CLOUD based application. He demonstrates how to go about it and shows how different ways of viewing and using size results can supply critical information to the process of creating and/or implementing cloud based applications.

To view Roger's paper in its entirety, visit the IFPUG website at www.ifpug.org

Q/P MANAGEMENT GROUP, INC.

Q/P's Consulting Services and Tools Result in Improved Quality, Cost & Productivity

Services Offered

- Benchmarking Software Development & Maintenance
- Outsourcing Management
- Measurement and Estimating Programs
- Function Point Analysis
- SEI CMMI Assessments
- Software Development Methodologies
- Project Management Techniques
- Quality Assurance Methods
- Continuous Process Improvements

Access to World-Class Measurement Tools

SMRe Benchmark Data Function Point WORKBENCH™ 7.0 Professional Edition

For information on Q/P Management Group products and services visit www.QPMG.com
Or contact us at:
email: moreinfo@qpmg.com or call +1.781.438.2692 email: moreinfo.europe@qpmg.com or call: +44.20.8133.8499

Certification Committee

By Mike Ryan and Greg Allen

Several new changes to certifications have been made in the last few months.

Certified Function Point Professional

Effective April 1, 2012 the Certified Function Point Professional (CFPP) certificate was made available to recognize a high level of Function Point Analysis knowledge that is just under the standard required for the Certified Function Point Specialist (CFPS) certification. CFPP is awarded to those writing the CFPS examination that do not meet the CFPS standard but do attain at least an 80% overall score and at least 70% on each of the three sections of the exam – Definition, Implementation and Case. An electronic certificate is issued and is valid for 3 years. The CFPP is NOT eligible for the Certification Extension Program.

A person holding the CFPP can retake the CFPS exam any time after a 2 week waiting period and upon scoring the higher CFPS standard will be awarded the CFPS certification.

First CFPP Awarded

Within days of the IFPUG Board of Directors announcing the creation of a new certification – the Certified Function Point Practitioner (CFPP) – we have our first recipient!

Congratulations to Junior Elson Alves of APF Metricas in Sao Paulo, Brazil, as the first person to earn the new Certified Function Point Practitioner certification on April 4, 2012.

In the words of Joe Schofield, IFPUG President, this new certification will "acknowledge the capabilities of measurement professionals."

CFPS Fellow

A quick dictionary search reveals a "Fellow" as a member of a learned society. In recognition of a unique class of IFPUG members – those with twenty years of continuous CFPS certification – the IFPUG Board of Directors has announced the creation of the CFPS Fellow. Members of this learned society must maintain their IFPUG membership, but no longer have to participate in the Certification Extension Program or write the CFPS exam to maintain their distinguished CFPS accreditation. There is no cost, special test or application process. Eligible members must not have a lapse of continuous CFPS Certification of more than 6 months over the 20 year period.

Watch for more details in 2013 as CFPS Fellows are announced.

Certification Extension Program

Effective July 1, 2012 the Certification Extension Program is becoming simpler with changes that allow you to more easily maintain your existing CFPS certification.

A one year certification extension is new. It only requires one approved activity. The program is now expanded to allow multiple occurrence credit with a given activity area. The application fee is $100 (USD) per documented activity or activity occurrence. There is a maximum limit of three activities or activity occurrences per application.

Detailed information about the CFPS Certification Extension Program, activity credit criteria, application, and necessary documentation process may be found on the IFPUG Web Site: http://www.ifpug.org/certification/certificationExtension.htm. If you have questions you may contact the Chair of the Certification Extension Program sub-committee at cep@ifpug.org.

Communication & Marketing Committee

By Melinda White, Chair

IFPUG's Communications and Marketing Committee (CMC) has been busy the last few months redesigning and redeploying our website at www.ifpug.org. The new bulletin board, IFPUG ISMA INSIGHTS is up and operational at ifpug.mymemberfuse.com. Although user registration is required, you do not have to be a member of IFPUG in order to participate in the discussions. CMC has also established a presence on LinkedIn, Twitter and Facebook. Look for us under IFPUG on all three social networking sites. Our ongoing mission is to provide our members with the latest in information that the organization has to offer.

Conference and Education Committee

By Kathy Lamoureaux, Vice Chair

Recently this year the Conference and Education committees merged. This presented a great opportunity for both committees to focus and collaborate on common goals such as planning the annual ISMA Conference.

Planning the annual ISMA conference is a yearlong event and this year the committee has been extremely busy with plans underway for ISMA7 scheduled to be held in Phoenix, Arizona. Workshops will be offered on October 28th and October 29th with the conference kicking off on October 30th into October 31st. Visit the website for more information on the conference and keep an eye out for future emails for the details of workshops and conference agenda.

The committee strives to hold a conference that presents valuable workshops, world class keynote speakers and industry topics that all attendees (first time and repeats) can learn and grow within the means of their own career

and organization. We look to partner when we can with other organizations to learn and bring more industry experience to the conference. This year we are partnering with PMI Arizona and look forward to their presence at the conference. As we grow closer to October and continue to finalize schedules and events, we are also moving ahead with preliminary plans for ISMA8.

Until then, we hope to see you at ISMA7 and please remember to take advantage of the workshop offerings!

Functional Sizing Standards Committee

By Tammy Preuss, Chair FSSC

Earlier this year, the IFPUG Board approved the creation of the Functional Sizing Standards Committee. The FSSC combines the membership of the former Counting Practices Committee (CPC) and the New Environments Committee (NEC).

Responsibilities for the FSSC include oversight and maintenance of the IFPUG Counting Practices Manual, serving as a forum for resolving issues in counting methodology, producing periodic guidance content for the membership such as Case Studies, White Papers, iTips, Hot Topics webinars, and Helpful Hints videos. We will also monitor the new IFPUG bulletin board discussion on the IFPUG website and continue supporting the Agile & Mobility interest groups. We will also be forming new interest groups based on membership feedback.

Goals

Our goals include ensuring the long term viability of FPs by promoting usage, providing guidance & feedback in new/emerging environments and maintaining the integrity of the IFPUG Functional Size Measurement Method. We look forward to continuing to serve the IFPUG membership.

CFPS Exam Version 4.3

The publishing of the automated Italian CFPS exam for version 4.3 is in process and is anticipated to go live in August 2012. Stay tuned for more updates in the near future.

A Regional CFPS exam in Spain was held June 27, 2012 in Madrid. This was the first time the CFPS exam version 4.3 was available in Spain.

IT Measurement and Analysis Committee

By Dawn Coley, Chair

Greetings to the IFPUG Membership from the newly formed "Information Technology Measurement and Analysis Committee" (ITMAC)!

ITMAC has been formed by combining and adjusting the scope of two previous IFPUG Committees—the Information Technology Performance Committee (ITPC) and the Management Reporting Committee (MRC). This change is part of a greater effort to streamline and improve the working of IFPUG's committee activities in order to better serve the membership. The ITPC and MRC committees were both wrapping up activities surrounding major deliverables. During the last year, the ITPC participated in the release of the first version of SNAP, and the MRC compiled, edited, and facilitated the publishing of the IFPUG sponsored book *The IFPUG Guide to IT and Software Measurement*. Now is an excellent time to move into the next chapter of both of their existences.

ITMAC is in the process of formulating a formal mission statement, goals, objectives and deliverable plan to provide strong value and support to the membership. As stated in the committee name, the focus of the activities will be to assist the IFPUG membership through value-added and timely deliverables focused on IT Measurement and Analysis. These deliverables will most likely take several different forms such as compilations of articles and presentations, identification of best

Software Measurement Reporting & Estimating Version 4.0
If Only Software Reporting and Estimating were Easy and Predictable … With *SMRe* it is!

- **Proven Estimating and Reporting Methodologies**
- **Standard and Flexible Reports**
- **Intuitive User Interface**
- **Modular Design**
- **Utilizes User Historical or Industry Benchmark Data**
- **Function Point Workbench Interface**
- **Scalable to Meet Your Organization's**

SMRe

For more information visit: www.QPMG.com or
North America Info at: moreinfo@qpmg.com or +1.781.438.2692
Europe Info at: moreinfo.europe@qpmg.com or +44.20.8133.8499

Q/P MANAGEMENT GROUP, INC.

practices, webinars, workshops, and the fostering of interest groups.

ITMAC will also continue to coordinate the representation of IFPUG members' interest with the International Software Benchmarking Standards Group (ISBSG).

Regarding each of the combined committees' recent critical deliverables . . .

The SNAP methodology will be owned and maintained by the SNAP Core Team separately from ITMAC activities. There is already a call for reviewers and beta test participants for release 2.0! Please see the IFPUG website for more information on this.

The recently released IFPUG sponsored book, "The IFPUG Guide to IT and Software Measurement", is available for purchase. The committee has received numerous positive responses from readers of the volume. The publisher's European distribution center even sold out all of their copies shortly after the book's release and more copies had to be shipped there. IFPUG members can receive a 25% discount on purchase of the book from CRC Press. Please see the IFPUG website for details on how to get the discount. Get your copy soon!

In closing, the new ITMAC committee is busy determining the best ways to provide value to IFPUG and its membership. Please keep your eyes and ears open for news of our activities. We look forward to serving you!

Membership Committee

By Roger Heller, Chair

The last few months have been challenging and exciting at the same time for the Membership committee. We are adding new members to get better representation from around the world. Robyn Lawrie (Australia) has joined Cao Ji, (China) and Aman Kumar (India) as a member of the committee. We anticipate adding a colleague in the near future to represent our European members' interests. We have been making progress. To date we have received approval from the IFPUG Board of Directors to build an archive of past IFPUG/ISMA conferences proceedings. The objective is to provide online access to all of the presentations that have been delivered at conferences since the founding of the organization. To that end we will be reaching out to all of the "old timers" to dust off their old paper files and help us out. Our long term goal is to have the complete history of IFPUG available for both members and non-members to research and reference. We have several more proposals in the works that are designed to make membership to IFPUG more accessible and useful. The success of our committee is tied to how well IFPUG supports your needs. Please don't hesitate to let us know if there is anything we can do on your behalf to help make your participation in IFPUG more valuable. Please feel free to contact us through the IFPUG office.

Super Files

By Chuck Wesolowski, CFPS
QinetiQ North America, Huntsville, AL

Imagine for a moment that you are reviewing a Function Count report and encounter a logical file with RET:5 DET:250. The report classifies it as having High complexity, and describes it as an ILF contributing 15 function points to the boundary size.

There is no doubt that using the ILF tables, this represents 15 function points. Do you continue on or does it pique your curiosity? After all, how many times would a mere mortal get to see something like this in a lifetime? An entity so great that it strains credulity, and the limits of functional measurement. It is the software equivalent of Godzilla -- it is a Super File!

Imagine seeing the following DET counts for the 5 RETS, let's call them a,b,c,d,e.

{a=10, b=120, c=70, d=20, e=30}

Note that b and c have DET counts that alone would qualify for Medium complexity, if each was it's own ILF.

{b=120} RET:1 DET:120 Medium FP:10

{c=70} RET:1 DET:70 Medium FP:10

This is a characteristic of Super Files, they are often truly monsters, or more accurately, examples of the software design anti-pattern called "The Blob."

What is the Blob? Consider the following definition:

"[A] Single class with a large number of attributes, operations, or both. A class with 60 or more attributes and operations usually indicates the presence of The Blob." [Akroyd 96]

See MITRE study http://www.antipatterns.com/briefing/sld025.htm

The Blob anti-pattern has been described as a lack of structural organization that needs refactoring to more accurately reflect the software architecture. When it comes to function points this lack of structural organization in Super Files results in grossly understating the size of the software, and is most likely the result of a poor software functional specification, counting from an implementation, or worse a deliberate

attempt to undersize the software.

The preceding example was taken from version 3.2 of the IFPUG CPM, where Bill Hufschmidt and others developed an approach to refactoring Super Files. It's efficacy in more accurately reflecting functional size was demonstrated by Charlie Tichenor in his doctoral thesis.

The practice involves splitting any logical file with more than twice the minimum threshold of DETS required for Medium or High complexity into multiple logical files -- this number happens to be 100. The results are presented, as they appeared in the example.

Transforming the Super File into 5 logical files yields:

{a} ILF RET:1 DET: 10 = 7 FP
{b} ILF RET:1 DET:120 = 10 FP
{c} ILF RET:1 DET: 70 = 10 FP
{d} ILF RET:1 DET: 20 = 7 FP
{e} ILF RET:1 DET: 30 = 7 FP

This yields 41 function points, instead of the previous 15 -- that's an increase of 26 function points.

Note that b is still extremely large, and is likely itself a blob.

The IFPUG method has been criticized for not being scalable, not able to measure entities in the hundreds of DETs, but this is actually an emergent quality characteristic of the method. The IFPUG method signals risk in its complexity assessment.

Medium and High complexity logical files deserve a second look to insure that they are not saturating the size function, resulting in an output that doesn't increase, regardless of how large the input grows.

These limits come at 5 RET and 50 DET on the two axes of the data contribution sizing function. For example, five groups of 10 is an even distribution that yields a medium complexity result. The addition of one DET, or the rearrangement of the grouping to four groups of 10 and two groups of 5 would trigger a high complexity result. Once this threshold is reached, the RET and DET counts can increase infinitely with no increase reflected in the functional size.

The average complexity rating draws our attention to things that might be too big, in this case, b and c. Examining their DET counts, we discover that they are still quite big for a single data group.

The "page test" can help understand why. At 80 lines to a page, how many pages would it take to print the names of each DET in the logical file, one per line? In our example, b would take 1.5 pages, and c would take nearly a page. Now imagine having to read and understand it. Each person has their own internal threshold for suspecting when a logically related group of data is merely a mind-numbing list; mine is about half a page, which is close to IFPUG's 50 DET.

For logical files with 1 RET, and a DET count greater than 50, it is prudent to ask if there might be a few subgroups in so many related items. In the case of b, with a count of DET:120, we may have a "Super RET." Remember, with 2^120 - 1 combinations of DET, there may be at least one more group that the user might recognize. If so, the High Complexity rating triggers, which is something that one would expect with so many DETs.

Assume for a moment that we managed to find some more groups in b and c,

{a} RET:1 DET:10 Low
{b0, b1} RET:2 DET:120 High Risk
{c0, c1} RET:2 DET:70 High Risk
{d} RET:1 DET:20 Low
{e} RET:1 DET:30 Low

Using the ILF tables this represents 51 function points.

The point is that 250 DET is a lot of information to organize into a logically coherent system. The odds of a domain object model with 250 DET being properly partitioned into only 5 groups is possible, but unlikely. Therefore, watch out for Super Files as they are guaranteed to distort your function point results!

The Next Frontier: Measuring and Evaluating the Non-Functional Productivity

LUIGI BUGLIONE

ETS / Engineering.IT SpA – Rome (Italy)

Email: luigi.buglione@eng.it

Recently IFPUG released the new SNAP (Software Non-functional Assessment Process) method, aimed at sizing the non-functional side of a software application. From FPA creation on, NFRs (Non-Functional Requirements) were typically dealt as "Requirements of a Lesser God", while in fact they represent a different and complementary contribution to a project than FURs (Functional User Requirements). This paper will try to introduce a rationale and tips for measuring non-functional productivity and using it jointly with 'functional' productivity in order to obtain more reliable estimates for future projects.

Part 1 – "How to think about it"

What is Productivity?

The Webster-Merriam dictionary defines productivity as "the rate at which goods are produced or work is completed". This general definition applies to any domain. Applied to FPA for sizing software projects, this is calculated as the ratio between the number of Function Points (goods produced) and the project effort (FP/Effort) to produce them.

But analyzing such a formula, a simple question arises: what are the related entities for the parts of the formula? Applying the EAM (Entity-Attribute-Measure) analysis—[15], 'FP' are a measure (M) of the functionality (A) of a software product (E), whereas 'man-days (or man-hours)' represents a measure (M) of the effort (A) of a software project (E). The two parts refer to different entities and are therefore not directly comparable – the formula needs refinement. Just a short example: let's suppose we have deployed 100 FP in 250 man-days. Productivity – as typically calculated – should be 100 FP / 250 man-days (0.4 FP per man-day). But if we add 15 more man-days for new stress and performance tests or for a further quality audit for guaranteeing a proper software quality level before its release, although no new FP would be created, a higher number of man-days would be computed in the productivity formula, with an updated value of 100 FP / 265 man-days, and a lower 0.38 FP / man-day productivity value.

The introduction of an 'adjustment factor' as a multiplier of the product functional size view is not proportional from an arithmetic point of view. We could run VAF-related activities for several man-days but obtain a final TDI lower than 35 and thus obtain a final 'adjusted' FP (AFP) value lower than the initial one. Observing the numbers, it would be paradoxical in both cases: doing more (non-functional activities, that is at least more man-days) but being (apparently) less productive (taking care of the current version of this formula). This could be called a 'nominal' productivity [1]. From a logical viewpoint, the two parts – functional and non-functional – should have been added, not multiplied. They are fundamentally different in nature (it is possible to run a change request that only impacts a requirement to improve system performance without any modification to FURs – Functional User Requirements).

Thus we need to look at the whole picture and apply the 'divide-et-impera' concept, as shown in Figure 1, for a better understanding of how to improve the whole size & estimate process flow.

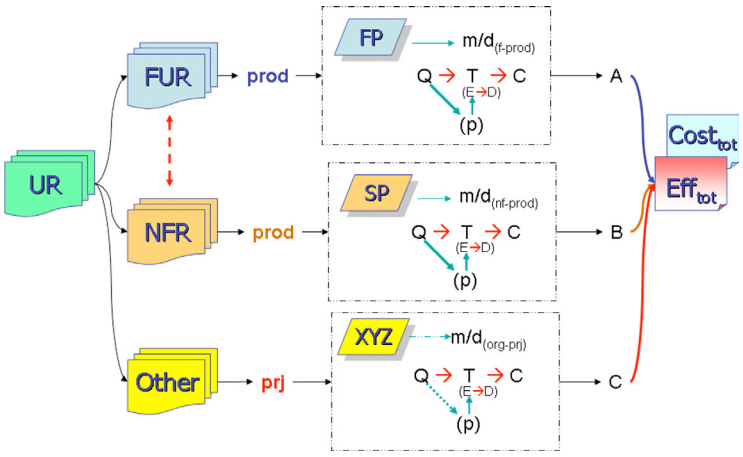


Figure 1: From User Requirements to the final overall project effort and costs

Original User Requirements (UR) can be classified at two levels: product-related and project-related. The first level can contain FUR (Functional User Requirements) and NFR (Non-Functional Requirements), with the FUR referring only to the 'product' entity while the NFR refer both to the 'product' (e.g. make the system compliant with usability/accessibility guidelines) and the project. The second level contains requirements about the 'project' itself (e.g. a weekly project status review must be run), sometimes expressed as constraints, but producing additional effort to be considered within the project scope.

The 'Q/T/C' chain in Figure 1 expresses 'Quantity/Time/Cost'. It is a generic, logical chain from the beginning to the end for any size & estimation activity: you need to determine how many activities to run, measured by one or more unit(s)

of measure (Q). According to this value, it's possible to estimate how much time (T) – time can refer to 'E' (effort) or 'D' (duration) – we need to undertake such work, whether by experience, analogy or statistically derived. In any case, we use – implicitly or explicitly – a reference productivity (p) value, as usual, returning the effort needed for working on that quantity of requirements. Once the time needed (both in terms of effort and duration) is estimated, it is possible to calculate the final cost, summing up fixed and variable costs for any group of activities. In fact, the risk here is that we pay too much attention to the 'sizing' issue rather than to the real goal, which is to achieve superior project estimation, reducing as much as possible the so-called 'cone of uncertainty' – [16] from earlier phases until project closure. Sizing – even fundamental and really valuable – is therefore only an intermediate step for the more comprehensive estimation process.

Thus, looking back to Figure 1 and referring to the 'product' entity, the product size unit for FUR can be IFPUG FP or any other fsu (functional size unit), while for NFR there are several possible approaches. Recently, IFPUG published an experimental measure, called SNAP (Software Non-functional Assessment Process), whose unit of measure is SP (SNAP points). Other requirements related to project activities (e.g. measurement, quality assurance, project management, etc.) will be discussed later.

As summarized in the table below, the 'productivity' formula could evolve from the current (a) scenario to the (c) scenario (where 'XYZ' stands for a possible size measure for expressing the effort for project-level activities), but achieving as earlier as possible at least the (b) scenario, reflecting increasingly higher maturity and capability levels of an organization in sizing & estimating projects.

Therefore, the 'next frontier' is to stimulate organizations into putting in action the (b) scenario: starting to measure NFRs and calculating a distinct productivity value that takes into account the different effort from different requirements types within the project scope so as to achieve better estimates. Anything can be refined (see the 'c' scenario), but one step at a time, in an evolutionary manner, is usually the best approach.

Of course, a further scenario could be to have all sizes gathered together (functional, non-functional, org-project) and use them in a multiple regression analysis as independent variables to be related to the whole project effort. While this would be useful when all three components are correctly measured, it is also worth drawing attention to because of at least the two following situations that can arise:

- SP can be referring to a large number of combinations in terms of category parts (or not) of the final size value (impacting therefore on the final effort). In benchmarking we would compare only similar non-functional profiles so as to reduce the probability of a lower R2 in a correlation analysis.
- Some maintenance projects may only require that the effort for product NFRs and Org-Project levels be derived (e.g. populate an existing database; update the user interface of a system with accessibility mechanisms). In that case, a project manager should derive the whole project effort as the summation of the (b) and (c) flows from Figure 1. But since it's difficult at such a time to define which project attributes could be sized and which productivity levels used for deriving the related effort, it seems more viable to sum the two efforts, independently calculated.

(a) Nominal productivity	(b) Functional and Non-Functional Productivities (Level-1)	(c) Functional, Non-Functional and Org-Project Productivities (Level-2)
$\frac{FP_{FUR-prod}}{Effort_{pj}}$	$\frac{FP_{FUR-prod}}{Effort_{FUR-prod}} + \frac{SP_{NFR-prod}}{Effort_{NFR-prod/Org-Pr\,j}}$	$\frac{FP_{FUR-prod}}{Effort_{FUR-prod}} + \frac{SP_{NFR-prod}}{Effort_{NFR-prod}} + \frac{XYZ_{Org-Pr\,j}}{Effort_{Org-Pr\,j}}$

This is why this proposal looks in an evolutionary manner (maturity) at the way organizations can gather their size and effort data at a certain level of granularity for improving their estimates. But before considering the size data, the effort data can represent the 'here and now' for a project, and they can be refined and split according to several criteria, revealing much valuable information about the way a project has been managed.

In the remainder of this paper Luigi introduces the new IPFUG SNAP (Software Non-functional Assessment Process) method for assessing product non-functional requirements, presents some practical advice on using existing project Gantt charts to help determine non-functional productivity, discusses how to go about considering both functional and non-functional sizes and estimates within a project and presents some initial ideas on collecting and utilising non-functional size and effort benchmarking data.

To view Luigi's paper in its entirety, visit the IFPUG website at www.ifpug.org.

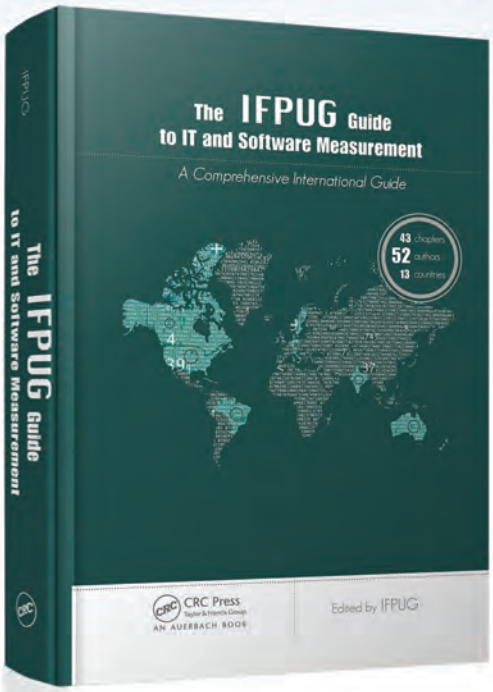
Conclusions & Next Steps

Function Point Analysis (FPA) along with other FSM methods is a very effective technique that has helped organizations to improve the way they manage their requirements, with a focus on the functional requirements. Because the less we know about one entity of interest, the less we are able to measure it, after many years we are now at a point where we know enough to also start measuring NFRs. Several approaches and techniques have been proposed to do this and IFPUG has recently proposed its own, called SNAP (Software Non-functional Assessment Process), whose unit of measure is SP (SNAP Points). The introduction of a complementary measure to FP (or another fsu – functional size unit) provides a win-win situation for many software project stakeholders:

Your Authoritative Guides to Software Measurement

The IFPUG Way

SAVE 25%



New!

The IFPUG Guide to IT and Software Measurement

Edited by

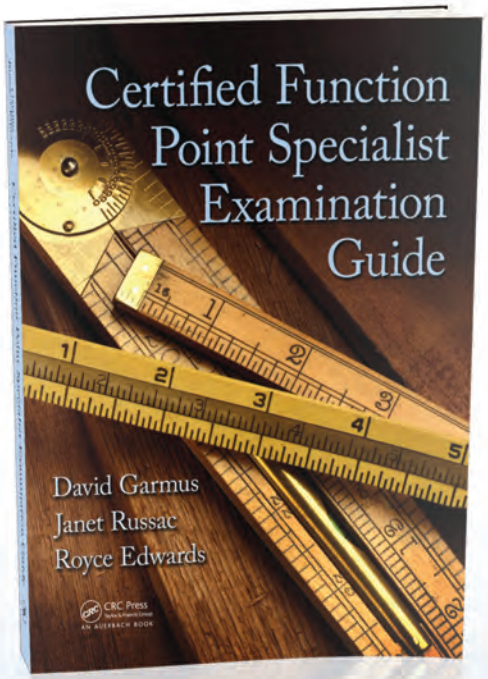
The International Function Point Users Group (IFPUG)

"Although the themes running through the chapters in this book are measurement and metrics, the application of these themes is to the practical issues faced by project managers, CIOs, sales people, testers, QA personnel, outsourcers, bid evaluators, and IT managers. This volume should be a close-at-hand reference for all these people."

—Peter R. Hill, CEO of the International Software Benchmarking Standards Group Limited

- Illustrates the impact of agile development on software measurement
- Explains how to use measurement to improve auditing and accountability
- Includes metrics for the CIO

Catalog no. K13177, April 2012, 848 pp.
ISBN: 978-1-4398-6930, *$79.95 / £49.99*



Certified Function Point Specialist Examination Guide

David Garmus, Janet Russac, and Royce Edwards

"… a comprehensive guide for the International Function Point Users Group (IFPUG) Functional Size Measurement method. … written to prepare practitioners planning to take the IFPUG Certified Function Point Specialist (CFPS) exam."

—*Research Book News*

"The authors are all qualified for the work at hand, and indeed have contributed to the function point counting methodology."

—Capers Jones, President, Capers Jones & Associates LLC

- Contains questions and answers in each chapter with specific references to version 4.3 of the Function Point Counting Practices Manual
- Supplies time-tested preparation tips from those who have passed the exam
- Includes two sample exams to help you determine where further study is needed

Catalog no. AU7637, July 2010, 244 pp.
ISBN: 978-1-4200-7637, *$46.95 / £30.99*

Enter promo code EVL20 at checkout and SAVE 25% + Free Shipping

Sign Up For Exclusive Discounts Only Available To Members of the CRC Press Online Community

See what you're missing.
SIGN UP NOW for EXCLUSIVE email offers at www.crcpress.com

WWW.CRCPRESS.COM

CRC Press
Taylor & Francis Group

- project managers and organizations, both customers or providers, because they'll be able to refine their estimates, reduce project/organizational estimation errors (e.g. measured by MRE/MMRE) and lead to an optimized use of project resources and assets;
- the measurement community, because it will stimulate ways to use the SNAP categories and/or similar approaches and taxonomies (e.g. ISO/IEC 9126-1:2001, FURPS, etc) for sizing NFR both at the product and project level.

So, the next frontier is simply to start and face this new exiting challenge!

"Computers are nonfunctional."

(Dr. Spok to Captain Kirk, Star Trek IV – The Voyage Home, 1986)

References

[1] Buglione L.., Some Thoughts on Productivity in ICT projects, WP-2008-02, White Paper, version 1.3, August 2010, URL: http://www.semq.eu/pdf/fsm-prod.pdf

[2] CMMI Product Team, CMMI for Development, Version 1.3, CMMI-DEV v1.3, CMU/SEI-2010-TR-033, Technical Report, Software Engineering Institute, November 2010, URL: http://goo.gl/sCC9i

[3] CMMI Product Team, CMMI for Services, Version 1.3, CMMI-DEV v1.3, CMU/SEI-2010-TR-034, Technical Report, Software Engineering Institute, November 2010, URL: http://goo.gl/C36ls

[4] IEEE Std 1291-1998, IEEE Standard for Software Maintenance, IEEE Computer Society, 1998

[5] IFPUG, Software Non-functional Assessment Process (SNAP) Assessment Practice Manual (APM), version 1.0, September 2011, URL: www.ifpug.org

[6] ISO, 9001:2008 - Quality Management Systems: Requirements, December 2008

[7] ISO/IEC, International Standard 14143-1 - Information Technology - Software Measurement - Functional Size Measurement - Part 1: definition of concepts, February 2007

[8] ISO/IEC, International Standard 14764:2006 – Software Engineering – Software Life Cycle Processes - Maintenance, 2006

[9] ISO/IEC, IS 12207:2008, Systems and Software Engineering -- Software Life Cycle Processes, International Organization for Standardization, 2008

[10] ISO/IEC, IS 15504-5:2006, Information technology -- Process Assessment -- Part 5: An exemplar Process Assessment Model, International Organization for Standardization, 2006

[11] IFPUG, Function Point Counting Practice Manual (CPM), release 4.3.1, January 2010, URL: www.ifpug.org

[12] Albrecht A. J., "Measuring application development productivity" in Proc. Joint SHARE, GUIDE, and IBM Application Development Symp., 1979, pp. 83-92.

[13] Albrecht A. J. & Gaffney J. E., "Software function, source lines of code, and development effort prediction: A software science validation," IEEE Trans. Software Eng., vol. 9, no. 6, November 1983, pp. 639-647.

[14] Buglione L., Tutto quello che avreste voluto sapere sui Function Points (e non avete mai osato chiedere), Gruppo Utenti Function Point Italia - Italian Software Metrics Association (GUFPI-ISMA), Rome (Italy), 6 May 2008, URL: www.gufpi-isma.org

[15] Buglione L., Ebert C., Estimation, Encyclopedia of Software Engineering), Taylor & Francis Publisher, April 2012, ISBN: 978-1-4200-5977-9

[16] Boehm B., Software Engineering Economics, Englewood Cliffs N.J., Prentice-Hall Inc., 1981, ISBN 0138221227

[17] ISBSG, D&E (Development & Enhancement) repository r11, June 2009, URL: www.isbsg.org

[18] Boehm, B.W., Horowitz, E., Madachy, R., Reifer, D., Bradford K.C., Steece, B., Brown, A.W., Chulani, S., Abts, C., "Software Cost Estimation with COCOMO II", Prentice Hall, New Jersey, 2000.

[19] ISO/IEC, IS 9126-1:2001 - Software Engineering – Product Quality – Part 1: Quality Model, International Organization for Standardization, 2001

[20] ISO/IEC, IS 25010:2011 – Systems and software engineering -- Systems and software Quality Requirements and Evaluation (SQuaRE) -- System and software quality models, International Organization for Standardization, March 2011

[21] Kassab M. Ormandjieva O., Daneva M., Abran A.., Non-Functional Requirements Size Measurement Method (NFSM) with COSMIC-FFP, Proceedings of IWSM/Mensura 2007, pp. 168-182, URL: http://goo.gl/8heVZ

About the Author

Luigi Buglione is a Measurement & Process Improvement Specialist at Engineering.IT SpA (www.eng.it - formerly Atos Origin Italy and SchlumbergerSema) in Rome, Italy and Associate Professor at the École de Technologie Supérieure (ETS) – Université du Québec, Canada. Previously, he worked as a Software Process Engineer at the European Software Institute (ESI) in Bilbao, Spain. Dr. Buglione is a regular speaker at international Conferences on Software/Service Measurement, Process Improvement and Quality, and is actively part of several International (ISO WG10-25, COSMIC, ISBSG, MAIN) and National (GUFPI-ISMA, AICQ, itSMF Italy, AutomotiveSPIN Italy) technical associations on such issues and contributes in IFPUG as member of MRC and Educational committees. He developed and was part of ESPRIT and of Basque Government projects on metric programs, EFQM models, the Balanced IT Scorecard and QFD for software and is a reviewer of the SWEBOK project. He received a Ph.D in Management Information Systems from LUISS Guido Carli University (Rome, Italy), a degree cum laude in Economics from the University of Rome "La Sapienza", Italy and is one of the few IFPUG CSMS (Certified Software Measurement Specialist) still certified from 2006. Further information on SPIMQ (www.eng-it.it/spimq) and SEMQ websites (www.semq.eu). He can be reached at luigi.buglione@eng.it or luigi.buglione@computer.org.

Special Recognition Awards

By Kriste Lawrence, Vice President

The IFPUG Board of Directors would like to share some special recognition that has recently been awarded: the 2011 Outstanding Contribution Award and to announce the 2011 IFPUG Committee of the Year.

The 2011 Outstanding Contribution Award:

We would like to recognize Linda Hughes for her dedication and commitment while serving on the Communication & Marketing Committee. We recognize that under very difficult personal circumstances as well as overly constrained time pressures, she was able to lead the Communications and Marketing Committee through a critical change. Thanks to her leadership we were able to keep the membership informed through current web site content and through e-blasts. Further, when web site support was in transition she was always there to motivate all involved with her endless energy and determination.

Because IFPUG is so dependent on a capable and faithful set of volunteers, we are awarding Linda with the 2011 Outstanding Contribution Award.

The 2011 Committee of the Year Award:

We would like to recognize Information Technology Performance Committee (ITPC) for their dedication and commitment while developing the Software Non-Functional Assessment Process (SNAP) Assessment Practices Manual (APM).

The members being recognized are:

Dan Bradley
Christine Green
Talmon Ben-Caan
Joanna Soles

We thank you, we appreciate you, and we wish you the very best in whatever roles you fill in the future.

Though the recognition may be very modest, please be assured that Linda and the members of the ITPC have not been overlooked nor was their courage amidst of all the circumstances. With these brief words we hope to have conveyed our gratitude to Linda and the members of the ITPC.

IFPUG Announces ISMA7 Conference Featured Speakers

This year the ISMA7 Conference arrives in Phoenix, Arizona and brings a full slate of presentations on trends and topics relevant to those who use measurement to manage software projects, resources and organizations. Workshops will precede the conference on October 28 and 29. Conference highlights will include presentations on measurement applied to Cloud and Agile development projects, practical experiences of measurement specialists in solving problems and delivering solutions, and innovative approaches to develop and use measurement in business settings. A particular emphasis will be the area of project management in conjunction with the Arizona chapter of PMI. The standard conference presentation tracks will include topics on function point analysis, estimation, metrics, management, and special topics addressing unique or unusual conditions. The SNAP measurement capability will be prominently discussed and exhibited. Panel discussions and Interest Groups will be facilitated to put attendee interest forward into the conference and generate new ideas and connections. The featured speakers at this year's conference include managers with deep experience in software issues and practical insights into the needs and uses of measurement in business. We think this will be a very memorable and illuminating lineup and look forward to a stimulating conference experience.

Tuesday, October 30

Day One Opening Presentation:

A Peek into the Future – A Customer's Priorities and Impact on the Future of IT

Dave Woodward, Insight

In his presentation, Dave Woodward brings "A Sales Guy's Perspective" to IT issues gained from more than 20 years of technology industry leadership experience. Dave is senior vice president, sales for Insight's U.S. operating division and is responsible for steering the performance of all sales functions at his company including inside, field, specialty and support teams across the U.S. He is focused on profitable market share growth, productivity and new client acquisition. Dave's responsibilities focus on customer priorities which in turn anticipate and ultimately determine the future direction of IT development and application. The imperative to identify and satisfy customer demands puts a practical and intensely focused perspective on measurement.

Dave's role includes building results-oriented sales teams.

Most recently Dave served as regional vice president of Insight's West Region sales team, where he fostered a culture of trust and teamwork based on a commitment to personal accountability and collaboration.

Dave joined Insight through Insight's 2008 acquisition of Calence where he had served since 2005. Prior to joining Calence, Dave spent more than 15 years in the technology industry, working for firms including Cisco Systems and Lucent Technologies. Dave holds a bachelor's degree in management from the University of Phoenix.

Day One Closing Presentation:

Optimizing Optimism: Why Engineers Should Be More Like Las Vegas Bookies

Dr. Ricardo Valerdi, University of Arizona, Systems & IndustrialEngineering Department

Being optimistic is good for your health, but in the cost estimation profession it can lead to big problems. Rather than focusing on optimizing measurement techniques or improving the accuracy of models and metrics, this talk focuses on the biggest source of estimation error: human error. Dr. Valerdi discusses heuristics, commonly observed shortcuts in decision making, which are frequently observed in software cost estimation and demonstrates how biases – specifically optimism bias – can be measured and corrected to improve estimation

accuracy. The goal of this talk is to encourage software estimators to be more like weather reporters and Las Vegas bookies and less like engineers.

Dr. Ricardo Valerdi is an Associate Professor at the University of Arizona in the department of Systems & Industrial Engineering. Previously he was a Research Associate in the Engineering Systems Division at the Massachusetts Institute of Technology. His research focuses on systems engineering metrics, cost estimation, test & evaluation, human systems integration, enterprise transformation, and performance measurement. His research has been funded by Army, Navy, Air Force, BAE Systems, Lockheed Martin, Raytheon, and the IBM Center for the Business of Government.

Dr. Valerdi is the co-Editor-in-Chief of the Journal of Enterprise Transformation and the Journal of Cost Analysis and Parametrics. He served on the Board of Directors of the International Council on Systems Engineering (INCOSE). He received a Ph.D. in Industrial & Systems Engineering from the University of Southern California and studied Psychology at Harvard University.

Wednesday, October 31

Day Two Presentation:

Re-examining Key Assumptions in IT and Turning Them on Their Head

Charly Paelinck, Caesars Entertainment

Charly's presentation will describe how a company in an analytically driven industry distinguished itself by re-examining key assumptions. Specifically, this talk will highlight the impacts on the Gaming industry of customer service and data analysis.

Charly is based at Caesars Entertainment headquarters in Las Vegas, NV. As Vice President of Enterprise IT for Caesars Entertainment, he is responsible for the development of all IT enabled business capabilities for Caesars, including their leading edge customer relationship (CRM) and business intelligence (BI) systems, and the systems that power the award winning Total Rewards® program. Information Week recognized Charly's organization as a Top 5 IT Development Organization.

Prior to Harrah's, Paelinck was the principal of a consulting company that focused on helping companies successfully develop and operate worldwide IT organizations. His customers included notable banking clients such as MBNA. Prior to that, he was the VP of Development for Sprint where he helped develop industry leading billing and order entry systems. Paelinck has also held various leadership positions in IT with Pepsi, Baxter and Kellogg's.

Charly Paelinck holds a graduate degree in Management Information Systems from the University of Arizona and an undergraduate degree in general studies from Illinois State University.

IFPUG Board of Directors

Joe Schofield, President
joescho@joejr.com

Kriste Lawrence, Vice President
Hewlett-Packard
kriste.lawrence@hp.com

Tom Cagley, Secretary and Communications & Marketing
David Consulting Group
t.cagley@davidconsultinggroup.com

Debra Maschino, Treasurer
NASCO
debra.maschino@nasco.com

Bruce Rogora, Immediate Past President
Pershing, Inc.
brogora@pershing.com

Lori Holmes, Counting Standards
Q/P Management Group
lori.holmes@qpmg.com

Christine Green, Applied Programs
Hewlett Packard
christine.green@hp.com

Mauricio Aguiar, International & Organizational Affairs
TI Metricas
mauricio@metricas.com.br

Steve Woodward, Education & Conference Services
Woodward Systems Inc.
swoodward@woodwardsystems.ca

Committee Rosters

Certification Committee:
- Greg Allen, Pershing LLC - ***Chair***
- Jim McCauley, B&W Y12 - ***Vice Chair***
- Mahesh Ananthakrishnan, Cognizant - ***Exam Sub-Chair***
- Michael Ryan, Bank of Montreal
- Nicoletta Lucchetti, SOGEI
- Joanna Soles, WellPoint
- Linda Ye, Bank of Montreal

Communications & Marketing Committee:
- Melinda White, NASCO - ***Chair***
- Linda Hughes, Accenture - ***Vice Chair***
- Debra Maschino, NASCO
- Steve Neuendorf, David Consulting Group
- Paul Radford, Charismatek Software Metrics
- W. David Thompson, Blue Pine Solutions Centre

Conference and Education Committee:
- Terry Vogt, Booz Allen Hamilton - ***Chair***
- Kathy Lamoureaux, Aetna - ***Vice Chair***
- Vajee Uddin, SPI
- Juan J. Cuadrado-Gallego, University of Henares
- Barbara Beech, AT&T
- Luigi Buglione, Engineering.IT SpA
- Peter Thomas, Steria
- Steven Woodward, Woodward Systems Inc.

IFPUG-ISMA Academic Secretary for Universities:
- Juan Cuadrado-Gallego University of Alcala

Functional Sizing Standards Committee:
- Tammy Preuss, AT&T - ***Chair***
- Bonnie S. Brown, HP - ***Vice Chair***
- Adri Timp, Equens
- Charles Wesolowski, QinetiQ
- Dan French, Cobec Consulting
- Jay Fischer, JRF Consulting
- Mike Pearl, HP
- Peter Thomas, Steria
- Roopali Thapar, IBM
- Steve Keim, The David Consulting Group

ISO Committee:
- Frank Mazzucco - ***Chair***
- Carol Dekkers, Quality Plus Technologies - ***Vice Chair***
- Mary Bradley, MSB2

IT Measurement Analysis Committee:
- Dawn Coley, HP - ***Chair***
- Joanna Soles, WellPoint - ***Vice Chair***
- Pierre Almén, ImproveIT
- Sivasubramanyam Balasubramanyam, HCL Technologies Ltd.
- Talmon Ben-Cnaan, Amdocs
- Luigi Buglione, Engineering.IT SpA
- Heidi Malkiewicz, Accenture
- Jalaja Venkat, Patni Computer Systems

Membership Committee:
- Roger Heller, QP Management Group - ***Chair***
- Aman Kumar Singhal, Infosys Limited
- Robyn Lawrie, Charismatek Software Metrics
- Ji Cao, Beijing SJ Tech. Ltd

NonFunctional Standards Committee:
- Steve Chizar - ***Chair***
- Abinash Sahoo, Amdocs - ***Vice Chair***

JOIN THE NEW DISCUSSION BOARD!
See what people are saying about the articles presented in this edition of *MetricViews* or start your own discussion.
Go to IFPUG ISMA Insights.

You can also check us out on Facebook and LinkedIn.

Congratulations to these NEW and Extended Certified Function Point Specialists!

Carlos Alberto Fernandes
Everis Brasil Consultoria

Fabio Alcoforado
Pitang Consultoria E Sistema

Cleriston Alvarenga
Gestao Ti

Mohankumar Anguraj
IBM

Pedro Augusto Araujo
Bradesco

Arturo Attardi
Accenture

Vincenzo Autiero
Gepin SPA

Jagannathan Balasubramanian
IBM Italia SPA

Marisa Balbi
KPMG Advisory SPA

Wylker Barros
Poliedro

Cintia Batista
RIS Informatica

Donald Beckett
Quantitative Software Management

Cristina Bertazzo
ValueTeam

Clarice Bertoli
TI Metricas Sericos Ltda.

Antonio Giovanni Bianchi
S.I.N. S.r.l.

Fedrica Bonifacio
HP

Sergio Brigido
HP

Isabella Bueno
Mirante tecnologia

Marcio Camilo
Empresa Brasileira de Correios e Telegrafos

Giuliana Capri
IBM Italia SPA

Arnaldo Carbone
Consip SPA

Ho Chuen Chan
Azeus Systems Limited

Filomena Chiariello
Accenture

Fulvio Contaldi
Convergent Technologies Partners

Claudio Bassani Correia Filh
Everis Brasil

Vito Cosentino
Business Integration Partners

Franciele Cunha

Andreia Da Cunha
Porto Seguro

Dimas Da Cruz
Devon Kreuz Sistemas Em Informatica Ltda

Ruth Da Silva
Algar Tecnologia

Joao Paulo De Angeli
Fatto Consultoria E Sistemas

Mauro De Falco

Renata Machado De Farias
Abrantes Solucoes Ltda.

Vitor De Oliveira
HP

Roberta Dias
PDCase

Maria Di Costanzo
Consip SPA

Serena Di Giacomo
ATOS

Giuseppe Di Iorio
HP Enterprise Services

Leandro Duarte Perez
BANCO BRADESCO S/A

Suganthi Duraisamy
IBM

Alexia Faria
MSA-INFOR Sistemas E Automacao Ltda.

Victor Farias
Abrantes

Anotonio Fazzari
Metoda SPA

Fabricio Ferrari

Welington Leles Ferreira Filho
XTI

Antonella Fintschi
Siemens

Federico Frezza
Consip SPA

Marcos Fujikawa
APF Metricas

Rosanna Gadaleta
Accenture SPA

Srividhya Ganesan
Mindtree Consulting

Francesco Gasparro
Capgemini Italia SPA

Irene Gianni
Engineering Ing. Inf. SPA

Celina Sayuri Goi
APF Metricas

Alessandro Grassi
Accenture SPA

Christine Green
HP

Peter Gruener
Gruener-IT Services E.U.

Vikram Gujar
Larsen & Toubro Infotech Limited

Nicola Iacovelli
Exprivia

Emerson Immianovsky
Teclo Gica

Kanhaiya Jethani
Cross Country Infotech

Rashmi Jhawar
Accenture

Sergio Jimenez Rubio
IBM

Radhika Kannan
IBM

Vijaya Kantam
IBM

Yoon-hee Keum

Youngsu Kim
DONGBU CNI

Bharath Koppolu
UnitedHealth Group IT

Nilesh Kulkarni
Larsen & Toubro Infotech Limited

Sampath Kumar Mukundan
Mindtree Consulting

Ajith Kumar Puthenveettil
Mindtree Consulting

Giuseppe La Rocca
Engineering SPA

Alfredo Lamantea
Engineering SPA

Flavio Antonio Leite
Politec

Leonardo Henrique Lopes
Basis Technologia da Informacao

Fausto Mancini
Exprivia

Javier Marcos Jimenez
Everis Brasil Consultoria

Ercilia Maria Gomes Muxagata Conrado

Luciana Martins
TechBiz Informatica Ltda

Giovanni Masciolini
TBS IT

Ederson Mastini da Costa
Everis Brasil Consultoria

Ismael Melo
Abrantes Solucoes Ltda

Ismael Melo
Abrantes Solucoes Ltda

Giuseppina Mencaroni
Consip SPA

Rosana Menezes

Resmi V. Menon
IBM

Leandro Miranda Meireles
BANCO BRADESCO S/A

Mousa Mitwasi
Software Management Solutions

Samarendra Mohanty
ENU

Ponmudi Mylsamy
Accenture

Anand Naik
Cross Country Infotech

Vinod Nair
L&T Infotech

Roberto Narcisi
Consip SPA

Carolina Nicolau da Silva
BANCO BRADESCO S/A

Congratulations to these NEW and Extended Certified Function Point Specialists!

Eduardo Oliveira
Infosis Consultoria E Sistemas

Elaine Oliveira
Politec

Roberto Paggio
C.T. Partners

Julieta del Rocio Palacios Arechiga
IBM

Kaustubh Pargaonkar
United Health Group

Armando Parise
GEPIN

Jongmo Park
National IT Industry Promotion Agency

Kilsang Park

Rafael Passaro
Prime Informatica

Harshada Patkar
Larsen & Toubro Infotech Limited

Dolores Perriello
Consip SPA

Vanitha Mary P. Prasad
Century Link

Fabricio Queiroz
PD Case Informatica Ltda

Satish Kumar Ragunathan
IBM

Nagagopi Ravulacheruvu
IBM

Mandar Redij
Larsen & Toubro Infotech Limited

Domenico Rinaldi
Exprivia SPA

Everton Rocha
BRQ IT Services

Edy Rodrigues Junior
CAPES

Andrea Romani
Accenture

Simone Ronchi
Accenture

Ismael Roriz
Politec Global IT Services

Gayathri Rs
UST Global

Laura Russo
Consip SPA

Srikanth Ryali
United Health Group

Antonella Saddi
Consip SPA

Santosh Sahoo
UnitedHealth Group IT

Tirupati Sahu
IBM

Alex Sant Anna
Banestes

Kamalakannan Santhanam
IBM

Luca Santillo
Agile Metrics di Santillo Luca

Danilo Santos
TI Metricas

Guiscardo Sbandi
Value Team

Banasree Sen
Accenture

Anna Serroni
Atos Italia SPA

Thirumaleshwara Shastry
Accenture

Adriano Silva
Teclogica

Marcia Silva de Morais
Foton Informatica S.A.

Archana Sinha
CSS Corp. PVT. LTD

Dhiego Soares
Cast Informatica S.A.

Claudia Soares
PD Case Informatica Ltda

Pablo Soneira
Sopra Group

Geetha Sreenivasa
IBM

Nimesh Srivastava
IBM

Radhakrishnan Sundaram Iyer
TATA Consultancy Services

Roopali Thapar
IBM

Anantnag Tirlapur
Century Link India Pvt. Ltd.

Angela Estela Turquete Cruz
BANCO BRADESCO S/A

Cirillo Vincenzo
Accenture

Jwalapur Vishnutheja
Accenture

Shivaprasad Yermal
Century Link India Pvt. Ltd.

Lorenzo Zambetti
Exprivia

IFPUG has a new WEBSITE Check it out at www.ifpug.org

ISMA^7 CONFERENCE REGISTRATION HAS BEGUN

Click here for UPCOMING EVENTS to register now.

Updating your information is now easier with the Members' Services Area on the website.
Visit today to update your profile so you won't miss out on upcoming news and events.

Publications can now be ordered through the Online Store featured on the IFPUG website.

Many items are now available for immediate download.

CHECK IT OUT!

We want to know…….. send your comments on the new website to ifpug@ifpug.org

THANK YOU FOR YOUR MEMBERSHIP!