

Measurement Convertibility - From Function Points to COSMIC-FFP



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AGENDA

- *Introduction*
- *Fetcke Study 1999*
- *Vogelezang & Leterthuis 2003*
- *Desharnais 2005*
- *Discussion*



Introduction

Multiple functional sizing methods:

- *ISO 19761: COSMIC-FFP*
- *ISO 20926: Function Point Analysis*
– IFPUG 4.1, unadjusted function points
- *ISO 20968: Mk II*
- *ISO 24570: NESMA*

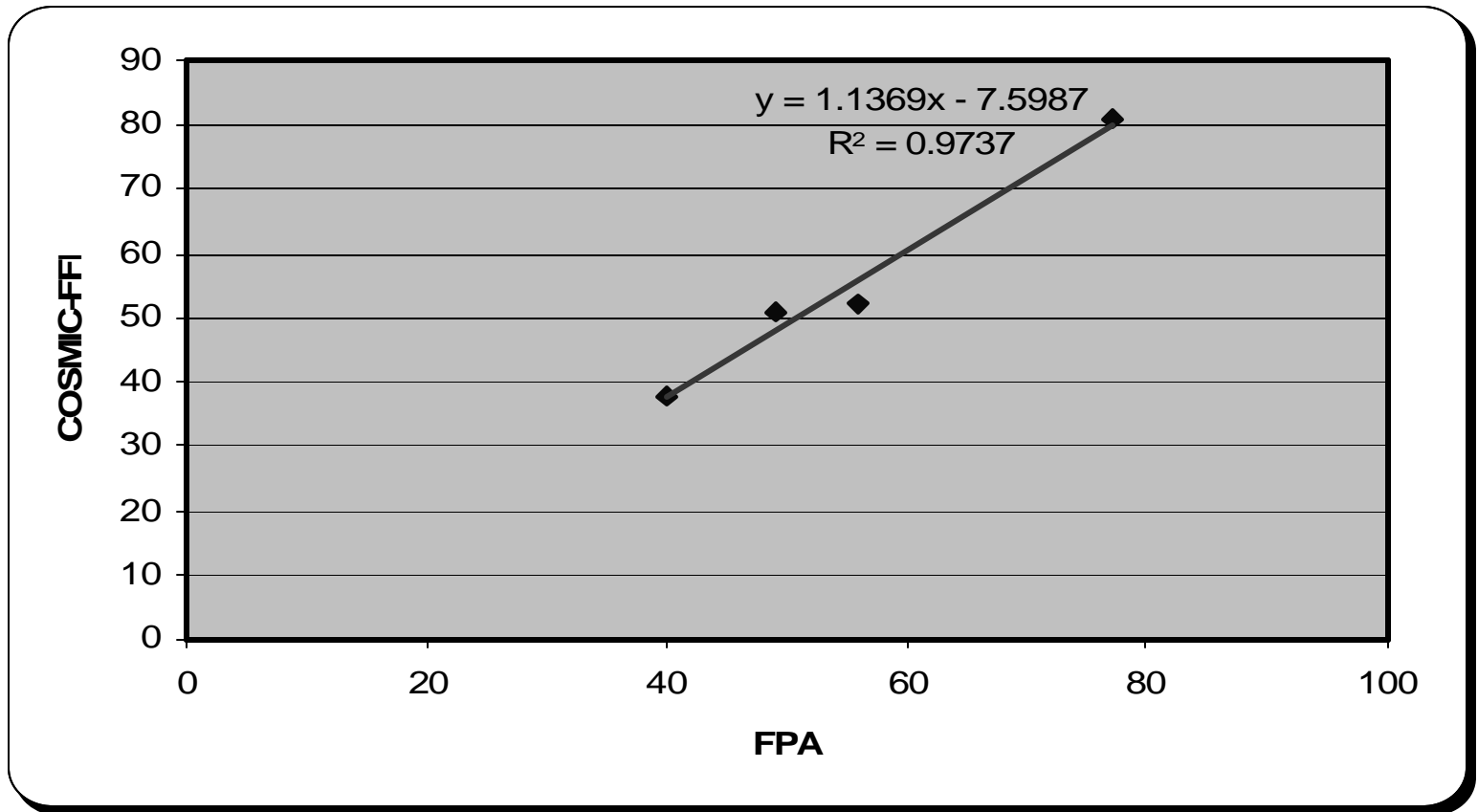
Software Types

Business	Business Application Software		Embedded or Control Software
Infrastructure	Utility Software	Users Tools Software	Developers Tools Software
	Systems Software		

Fetcke 1999

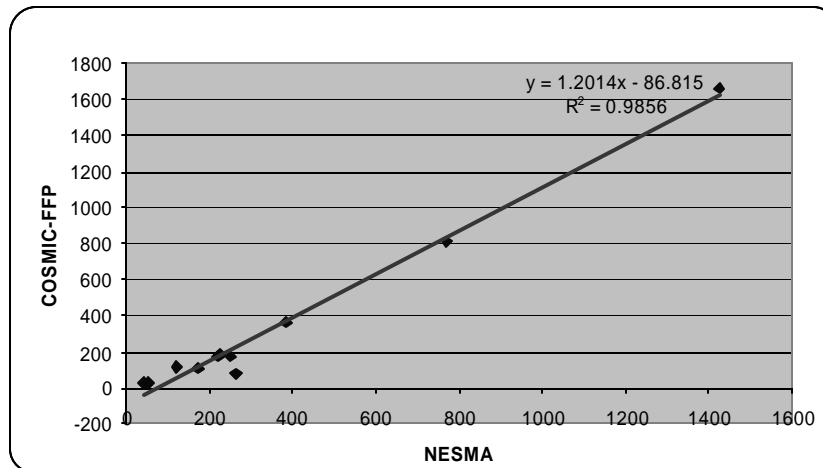
<i>Software</i>	<i>FPA</i>	<i>COSMIC- FFP</i>	<i>With convertibility formula in Cfsu</i>	<i>Convertibil ity Delta</i>	<i>% Delta</i>
<i>Warehouse</i>	77	81	79	-2	2%
<i>Customer business</i>	56	52	56	4	8%
<i>Customer Mgnt</i>	49	51	48	-3	6%
<i>Manufactur ers Wareh.</i>	40	38	38	0	0%

Fetcke Study 1999



Software	NESMA (1)	COSMIC- FFP (2)	With convertibility formula in Cfsu (3)	Convertibility Delta (4) = (3) - (2)	% Delta (5) = (4)/(2)
1	39	23	-40	-63	-274%
2	52	29	-25	-54	-186%
3	120	115	57	-58	-50%
4	170	109	117	8	8%
5	218	181	135	46	25%
6	224	182	182	0	0%
7	249	173	212	39	23%
8	260	81	226	145	179%
9	380	368	369	1	0%
10	766	810	832	22	1%
11	1 424	1662	1613	53	3%

Table 2a : Vogelezang & Leterhuis Data Set [6]



Software	NESMA (1)	COSMIC-FFP (2)	With convertibility formula in Cfsu (3)	Convertibility Delta (4) = (3) - (2)	% Delta (5) = (4)/(2)
1	39	23	27	4	16%
2	52	29	36	7	26%
3	120	115	88	-27	-24%
4	170	109	125	16	15%

Table 2b : Vogelezang & Leterhuis –

Less than 200 NESMA points

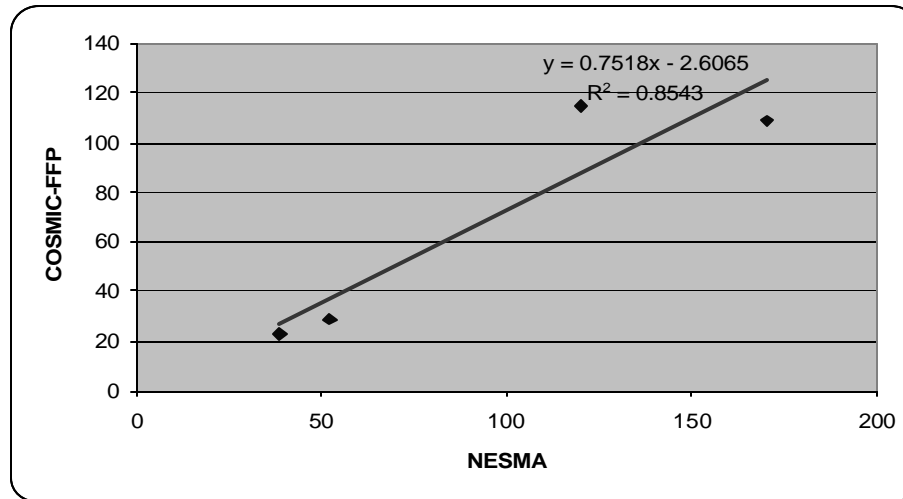


Figure 3b Vogelezang & Leterhuis data graph
(less than 200 NESMA points)

Software	NESMA (1)	COSMIC-FFP (2)	With convertibility formula in Cfsu (3)	Convertibility Delta (4) = (3) - (2)	% Delta (5) = (4)/(2)
5	218	181	138	-43	-24%
6	224	182	145	-37	-20%
7	249	173	176	3	2%
8	260	81	190	109	134%
9	380	368	337	-31	-8%
10	766	810	811	1	0%
11	1 424	1662	1620	-42	-3%

Table 2c : Vogelesang & Leterhuis –

Greater than 200 NESMA points

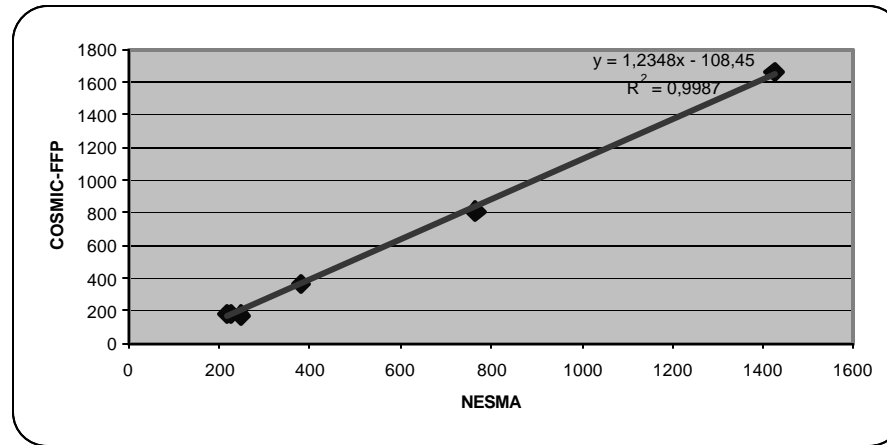
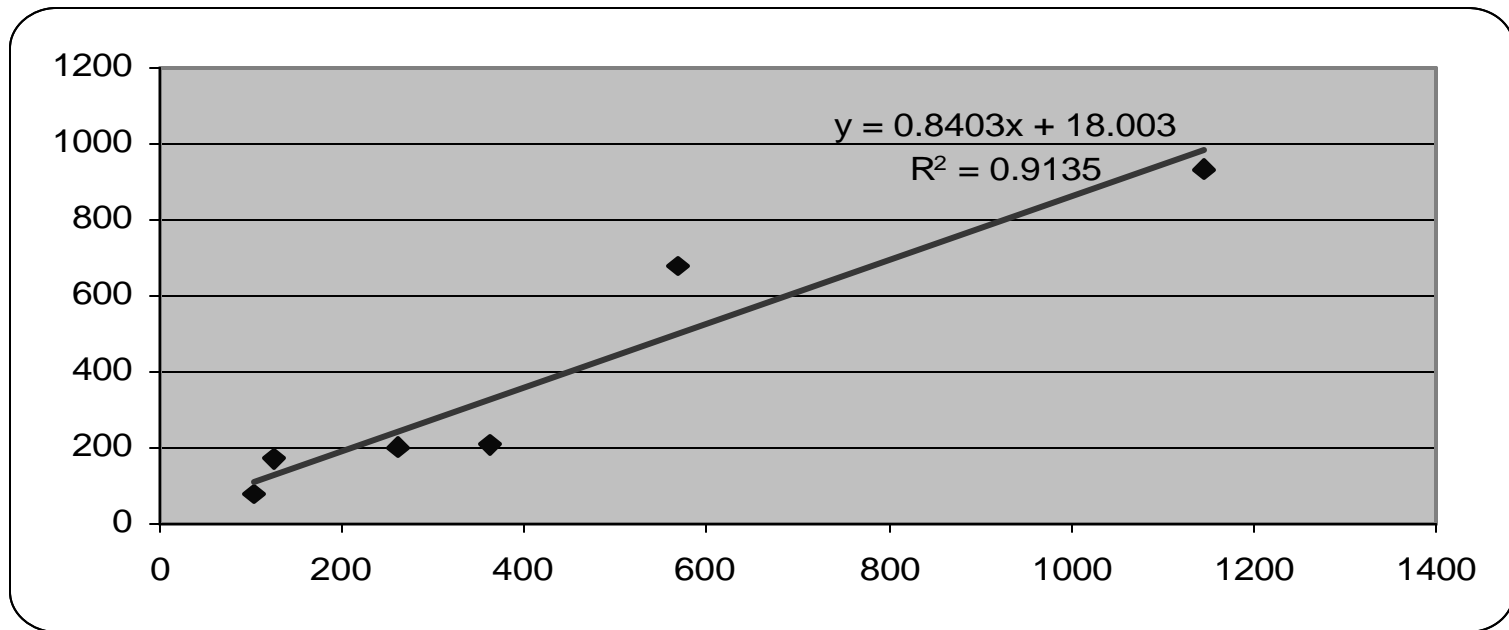


Figure 3c **Vogelezang & Leterthuis data graph**

(more than 200 NESMA points)

Desharnais 2005 – all FP



Software	FPA TX (1)	COSMIC-FFP (2)	With convertibility formula in Cfsu (3)	Convertibility Delta (4) = (3) – (2)	% Delta (5) = (4)/(2)
1	60	75	87	12	16%
2	196	209	271	62	29%
3	60	170	87	-83	-49%
4	179	203	248	45	22%
5	688	934	936	2	0%
6	468	675	638	-37	-5%

Table 3a : Desharnais 2005 Data –

Transactions size only

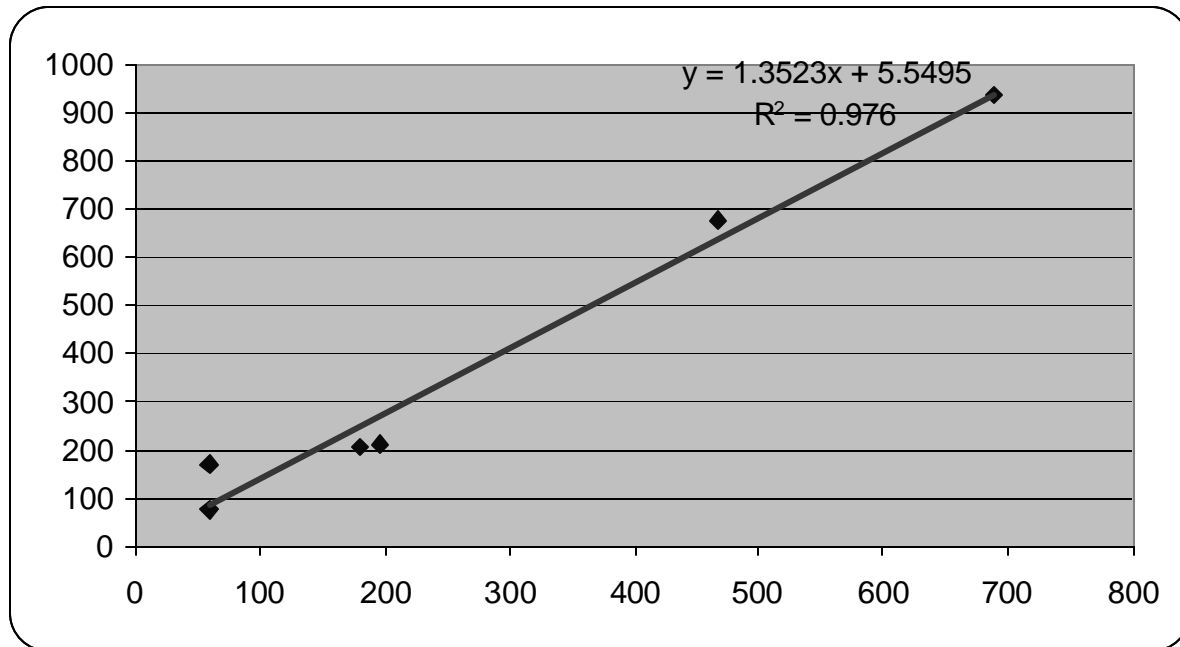


Figure 4b : Desharnais 2005 Data graph - -
Transactions size only



Discussion

- ☞ *Promising avenue, but not yet enough data for generalization*
- ☞ *For the time being, industry should carry a small scale duplicate measurements to obtain a convertibility formula tailored to their data set.*



Thank You !



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