

FCCM 2011 Top Ten
Predictions for FCCMs in 2016



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- This is a semi-official, semi-serious, fully-enjoyable activity at FCCM, which has become a periodic tradition.
- It combines prediction of where the FCCM field is headed with a bit of fun.



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- Monday: Nominations
 - 55 predictions submitted by email during the day
 - Discussion over beers at Demo Night
- Tuesday: Voting
 - SurveyMonkey website: **48 voters**
- Tuesday wrap-up: Results!!!



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Predictions session!



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8: FPGAs will contain embedded GPUs



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7: Dynamic Partial Reconfiguration will
be accessible to the masses



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6: Intel acquires an FPGA company.



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- 7: Dynamic Partial Reconfiguration will be accessible to the masses
- 6: Intel acquires an FPGA company.
- 5: VHDL and Verilog will remain ubiquitous for circuit expression.



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4: Heterogeneous architecture will be in common practice and will be in market.



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- 4:** Heterogeneous architecture will be in common practice and will be in market.
- 3:** Can buy FPGA IP from an FPGA App store
- 2:** Reconfigurable fabrics will be integrated onto Intel CPUs.



FCCM 2011 Top Ten Predictions for FCCMs in 2016

- 1:** A high-level, object oriented solution for FPGA design will be popular (it won't be C to gates)
-- 37% of voters



FCCM 2011 Awards for Most Brilliant Prognosticators



- Lesley Shannon, SFU
#1, 20% of the Top Ten



- André DeHon, U Penn
20% of the Top Ten



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Thank You All for
Another Great FCCM!



FCCM 2011 Top Ten Predictions for FCCMs in 2016

Lesley Shannon	1	A high-level, object oriented solution for FPGA design will be popular (it won't be C to gates)	17	37%
Jason Bakos	2	Reconfigurable fabrics will be integrated onto Intel CPUs	16	35%
Andre DeHon	3	Can buy FPGA IP from an FPGA App store	13	28%
Kunjan Patel	4	Heterogeneous architecture will be in common practice and will be in market.	13	28%
Shep Siegel	5	VHDL and Verilog will remain ubiquitous for circuit expression.	13	28%
Andre DeHon	6	Intel acquires an FPGA company.	12	26%
Lesley Shannon	7	Dynamic Partial Reconfiguration will be accessible to the masses	10	22%
Mike Wirthlin	8	FPGAs will contain embedded GPUs	10	22%
Jason Bakos	9	FPGAs will move to 3D by having stacked dies within one package	10	22%
Carl Ebeling	10	Mike Butts will do another Top 10 Predictions session!	9	20%
Muhammad Shafique	11	Embracing ARM with Reconfigurable Computing will invade the Embedded Market	8	17%
Lesley Shannon	12	FCCM will have returned home to Napa, CA	8	17%
Lesley Shannon	13	We will still hate the tools, but not as much as we used to hate them =)	8	17%
Kunjan Patel	14	High level synthesis will be common but will suffer from unified approach, language or tools.	7	15%
Lesley Shannon	15	I will still be able to go away for a long weekend and return before the CAD tools are done Place and Route.	7	15%
Satnam Singh	16	My application runs slower on the FPGA than the GPU but it consumes less power (honest, really, OK, so the power comparison was bogus, but I need tenure!)	7	15%
Jason Bakos	17	Place and route tools will be accelerated with GPUs	7	15%
Justin L. Tripp	18	FPGAs in every game console	6	13%
Lesley Shannon	19	It still won't fit.	6	13%
Muhammad Shafique	20	Reliability and Low-Power will be the two giants that reconfigurable computing has to defeat	6	13%



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Anthony Stansfield	21	Virtex 10 has embedded GPUs.	6	13%
Andre DeHon	22	25% of silicon content (by area) in the cloud is FPGA.	5	11%
Anthony Stansfield	23	Bill Luts changes name to Bill Gpus	5	11%
Andre DeHon	24	FCCM presentation exceeds 1M views on YouTube	5	11%
Justin L. Tripp	25	FPGAs with GPUs.	5	11%
Justin L. Tripp	26	FPGAs with optical routing	5	11%
Lesley Shannon	27	Network-on-Chip topologies will be a common design infrastructure	5	11%
Lesley Shannon	28	The number of women attending FCCM will outnumber the number of men =)	5	11%
Anthony Stansfield	29	The usual suspects - too slow, some applications are too big, tools are a pain...	5	11%
Mike Wirthlin	30	FCCM will be renamed to GCCM (GPUs for custom computing machines)	4	9%
Andre DeHon	31	FPGA-skype allows uninterrupted remote 3D virtual presence presentation	4	9%
Carl Ebeling	32	FPGAs will comprise a substantial fraction of cloud computing cycles.	4	9%
Anthony Stansfield	33	Functional programming is preferred academic design flow. Industry still using hdl.	4	9%
Justin L. Tripp	34	GPUs with FPGAs.	4	9%
Lesley Shannon	35	There will be improved runtime debugging/verification support (much better than Chipscope/SignalTap)	4	9%
Justin L. Tripp	36	Biologic based reconfigurable processing (using DNA molecules)	3	7%
Justin L. Tripp	37	Heterogeneous block area exceed the general purpose logic area	3	7%
Mike Wirthlin	38	Intel will buy Xilinx	3	7%
Mike Wirthlin	39	It will fit but I can't program it!	3	7%
Andre DeHon	40	Most FPGAs programmed from C. (not sure this is a great thing....)	3	7%



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Scott Hauck	41	Powerpoint animations on 3D projectors cause 4 seizures, 1 death.	3	7%
Lesley Shannon	42	Real low-power FPGAs will make them common components in portable devices	3	7%
Lesley Shannon	43	The majority of FPGA designs will be embedded computing systems combining a processor and hardware accelerator(s)	3	7%
Jason Bakos	44	The newest FPGAs will be available in a 3000-pin package	3	7%
Kunjan Patel	45	The power will be major problem for reconfigurable computing.	3	7%
Justin L. Tripp	46	FPGAs are free	2	4%
Justin L. Tripp	47	More string matching!	2	4%
Justin L. Tripp	48	My supercomputer cluster on a chip won't fit.	2	4%
Scott Hauck	49	People hopeful the latest hot chip startup will finally be the first success in the area.	2	4%
Mike Butts	50	Power problems solved by Cold Fusion from U. Utah!	2	4%
Satnam Singh	51	All circuit design will be done in Haskell.	1	2%
Andre DeHon	52	FCCM netcast to > 10K active participants worldwide, with >75% using FPGA-based video codec	1	2%
Carl Ebeling	53	IBM will have acquired Tabula, for the CAD.	1	2%
Mike Butts	54	Recursive hardware opens the door to Haskell FCCMs.	1	2%
Justin L. Tripp	55	FPGAs based on GaAs	0	0%