ECON ASICs

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ASICs PMG 14 Dec 2020

ECON week-by-week schedule

	Sep 25	Oct 2	Oct 9	Oct 16	Oct 23	Oct 30	Nov 6	Nov 13	Nov 20	Nov 27	Dec 4	Dec 11	Dec 18	Dec 25	Jan 1	Jan 8	Jan 15	Jan 22	Jan 29	Feb 5	Feb 12	Feb 19	Feb 26
Synthesis							•																
LEC: RTL vs. netlist**																							
Floorplan and top-level RTL architecture																							
Constraints + Placement																							
Clock tree synthesis				Requ	ires fin	al Aut	Enco	der and	d serial	izer													
Routing + Hold fixing						Requ	ires fir	al PLL															
Timing + Noise analysis							Probl	ems w	ith timi	ng brir	ngs bad	ck to co	onstrai	nts									
LEC: RTL vs. post-layout netlist**																							
Tempus : static timing analysis							-																
Metal fill + Density check							Need to understand how to fill around analog blocks																
DRC							Alpar	na can	start a	fter rou	uting												
LVS						Could start after routing, but needs person (Chinar needs to finalize)																	
Top-level second pass																		Diffic	ult to e	stimate	e until t	flow is	comple

- Implementation team has worked through "Routing & Hold Fixing" step
 - Timing closure on 1.28 GHz paths was very slow to converge.
 - Iterative process to update verilog, timing constraints, and scripts is now ~complete.
- According to Sep 2020 schedule, we are 7 weeks behind schedule
 - "lost" 4 weeks in last 4 weeks
 - time reserved for top-level second pass reduced from 8 to 1 weeks.
 - Despite iterations Chinar has NOT been idle while awaiting changes: addressed a large number of small routing issues not included in the original Sep estimate.
- Lessons being learned:
 - Ramping up large teams and new hires is especially challenging with fully remote work during global pandemic.
 - Large teams benefit standardized system for exchanging IP and information we have been developing for ECON team as we go.
 - Team would benefit from more automation of design flow: e.g. still relying on manual checking of logs, etc.

ECON FY21 Request

Avg weekly FY21 Oct Sep Dec Jan 21 Feb Mar Apr May Jun Jul Aug Sep
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Milestone							Sub T						Sub D Rec T				
Braga	16.4	322	97	25	58	71	71										
Gingu	30.9	1556	150	107	93	134	134	134	134	134	134	134	134	134			
Hoff	24.7	1334	138	148	83	107	107	107	107	107	107	107	107	107			
Shenai	27.5	1145	128	99	83	119	119	119	119	119	119	119					
Syal	33.9	1433	175	126	105	147	147	147	147	147	147	147					
Wang	28.1	649	183	112	110	122	122										
Wickwire	38.8	1643	200	146	120	168	168	168	168	168	168	168					
Testing								84	84	84	84	84	84	84			
Period Tot	200					868	868	760	760	760	760	760	325	325			

• Presented to PPD Finance last week.