

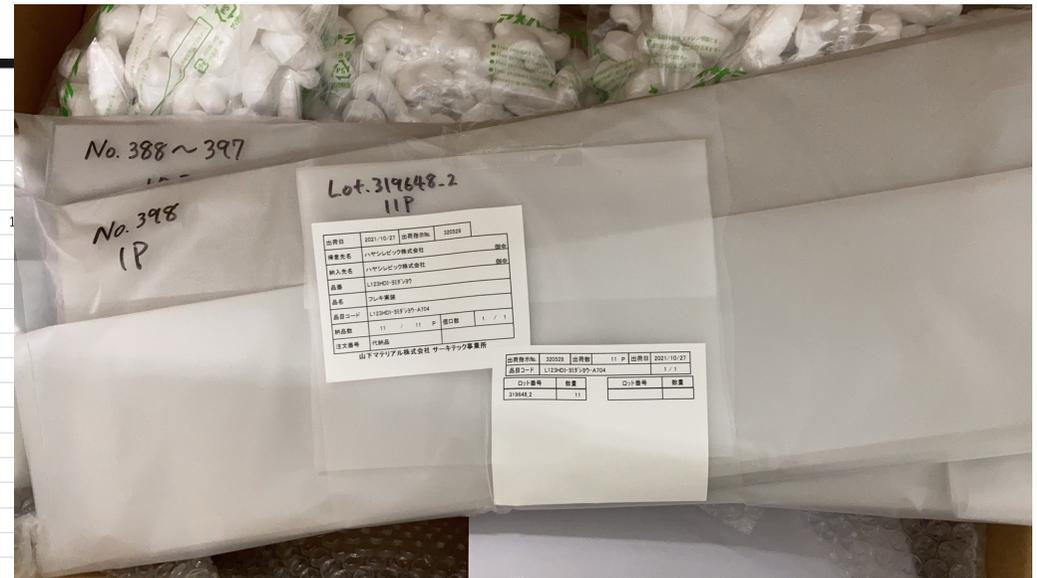
Production Status

RIKEN/RBRC

Itaru Nakagawa

Batch-3 HDI Production

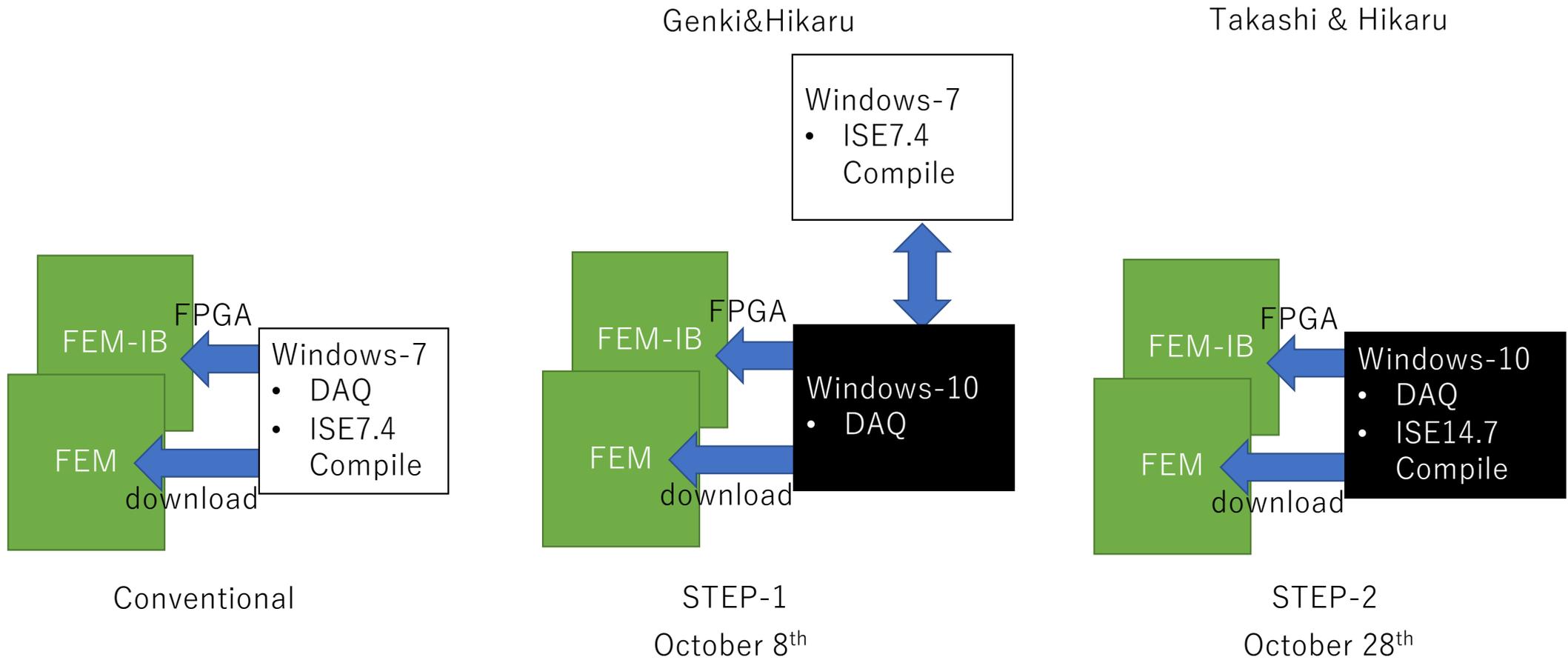
1	Delivery Day	Batch	Order #	LOT #	Quantity	HDI Serial No.	Incremented Quantity	Inspection	Result	Shipped to Taiwan	
2	2019/1/23		349670	302382	6						
3	2019/2/6		349670	302725	4						
4	2019/9/11	Preproduction	350963	306716	20						
5	2019/11/20		Exchanged	307469	1						
6	2020/4/2		352075	310184	9	1	9	9			
7	2020/4/2	Batch-1A	352075	310185_1	7	10	16	16			
8	2020/4/2		352075	310185_2	13	17	29	29			
9	2020/4/2		352075	310186	29	30	59	59	50	Good!	
10	2020/4/28		352075	310188	17	60	76	76	70	bad	
11	2020/4/28		352075	310189	24	77	100	100	80, 84	bad	
12	2020/6/8		352075	311139	2	101	102	102			
13	2020/6/8		352075	311587_1	7	103	109	109	105	taiwan	
14	2020/6/17	Batch-1B	352075	311587_2	2	110	111	111		1 bad	
15	2020/6/17		352075	311614	15	112	126	126	122	taiwan	
16	2020/6/24		352075	311615	21	127	147	147	127	taiwan	
17	2020/7/9		352075	312095	20	148	167	167		3 bad	
18	2020/7/9		352075	312096_1	6	168	173	173			
19	2020/7/21		352075	312096_2_1	7	174	180	180			
20	2020/7/28	Batch-1A	Exchanged	312096_2_2	1	24	24	180			
21	2020/9/28		353110	312532	20	181	200	200		1 bad	
22	2020/9/28		353110	312533	16	201	216	216			
23	2020/9/29		353110	312534	7	217	223	223			
24	2020/9/29	Batch-2	353110	312535	14	224	237	237			
25	2020/9/29		353110	312536	7	238	244	244			
26	2020/10/27		353110	313304	24	245	268	268	265	taiwan	
27	2020/11/27		353110	313673	2	269	270	270		2	
28	2021/6/28			317333_2_2	11	271	281	281			
29	2021/7/5	Batch-3		317338	14	282	295	295		1 bad	
30	2021/7/19				317341	23	296	319	319		
31	2021/8/6				318459	22	319	340	342		Taiwan
32	2021/8/6				318600	13	341	353	353		Taiwan
33	2021/9/24				319648	34	354	387	371		BNL
34	2021/10/27				319648_2	11	388	398	398		Taiwan
35				Batch3 Sum (8/3)		83					Total
36			Batch3 Goal		128						



90 Batch-2 Total

- The last 11 HDIs are delivered instead of requested 13.
- Given the impact to request for 2 more HDIs, I suggest to close the case.
- 2 HDIs to be restored from batch-2 LOTs which haven't find any bad ones yet.
- e.g. 311587_1, 311614, 311615, 311304

Windows-10 Upgrade Staging



Windows-10 Upgrade (FPGA)

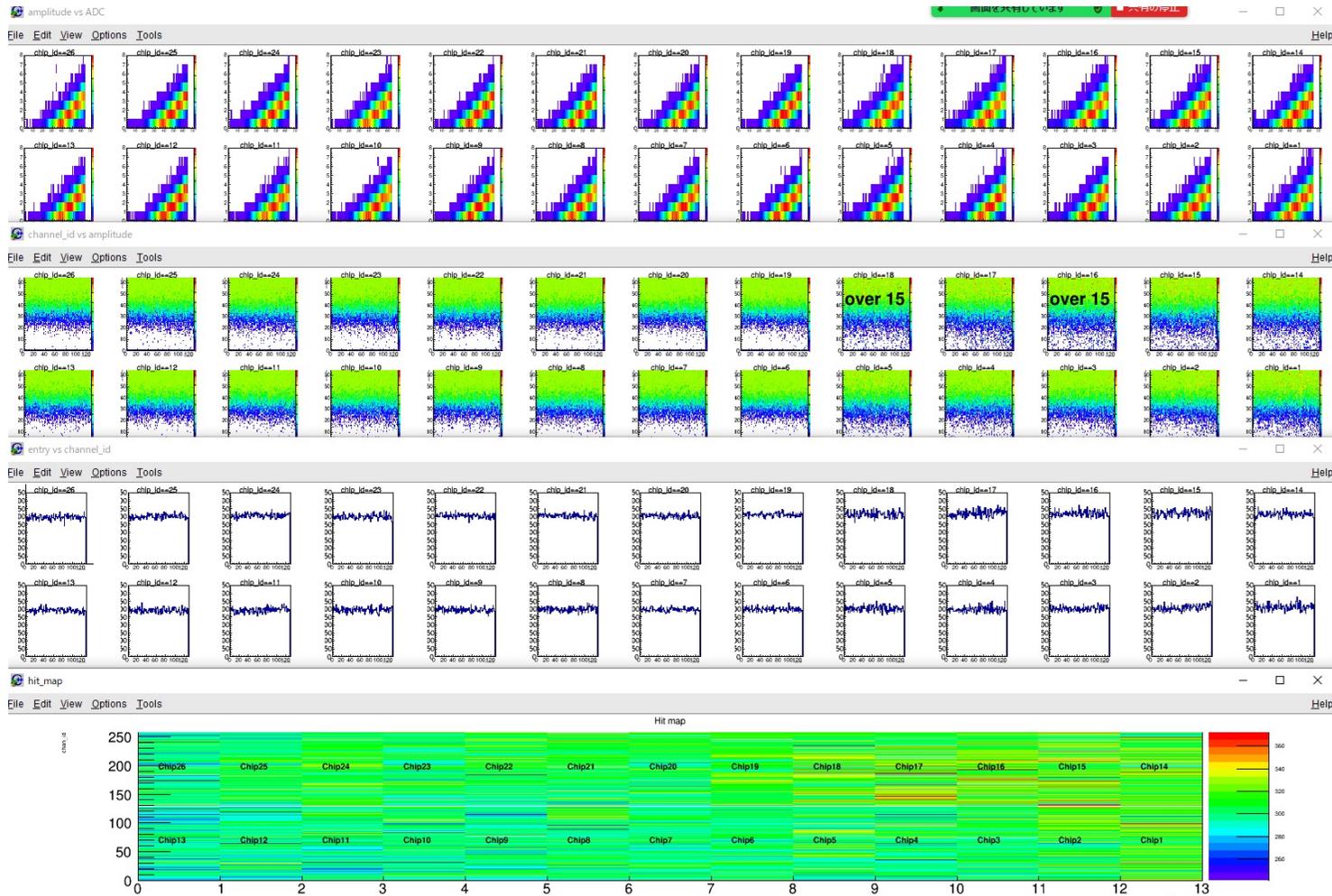
The screenshot shows a web browser window displaying the SPHENIX wiki page "Test bench Setup from Scratch". The page is organized into several sections:

- Executive Summary**: Includes links to "Instruction (pdf)", "Hardware List google spreadsheet", "Cabling Details pdf (32.8MB)", and "Various Mapping File pdf (11.5MB)".
- PC setup**: Lists various installation steps such as "National Instruments PCIe Board Installation", "Xilinx ISE Installation", "Python Installation", "FTD2XX Driver Installation", "Visual studio Installation", "Boost Installation", "ROOT installation", "Liberio SoC installation", "Final Setup", and "Nevis GUI installation".
- Data-taking**: Contains instructions on how to compile FEM FPGA codes, download the DAQ, and run the DAQ. It also lists "FEM FPGA codes" with a link to the "2021/10/28 Windows-10 version (migrated by HDLab): FEM-data(zip) | FEM-SC(zip) | FEM-IB(zip)", which is highlighted by an orange arrow.

- The migration of standalone FPGA codes by HDLab was completed by Oct.28th.
- New codes compiles using ISE14.7 on Windows-10.
- H. Imai confirmed the calibration data taking was successful with the new mcs files of FEM-Data, FEM-SC, FEM-IB codes.
- New codes are available on wiki.
- There are still some difficulties in Windows-10 operation, but the codes seem to work fine.
- Once we resolve remaining problems, we'll develop an instruction.

Thanks to **Takashi** for technical cooperation with HDLab and **Hikaru Imai** for testing new codes.

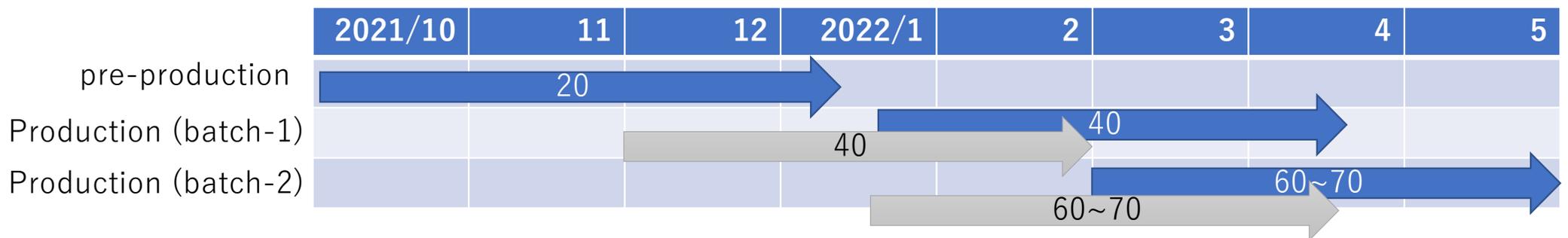
Calibration Data Taken with the new code



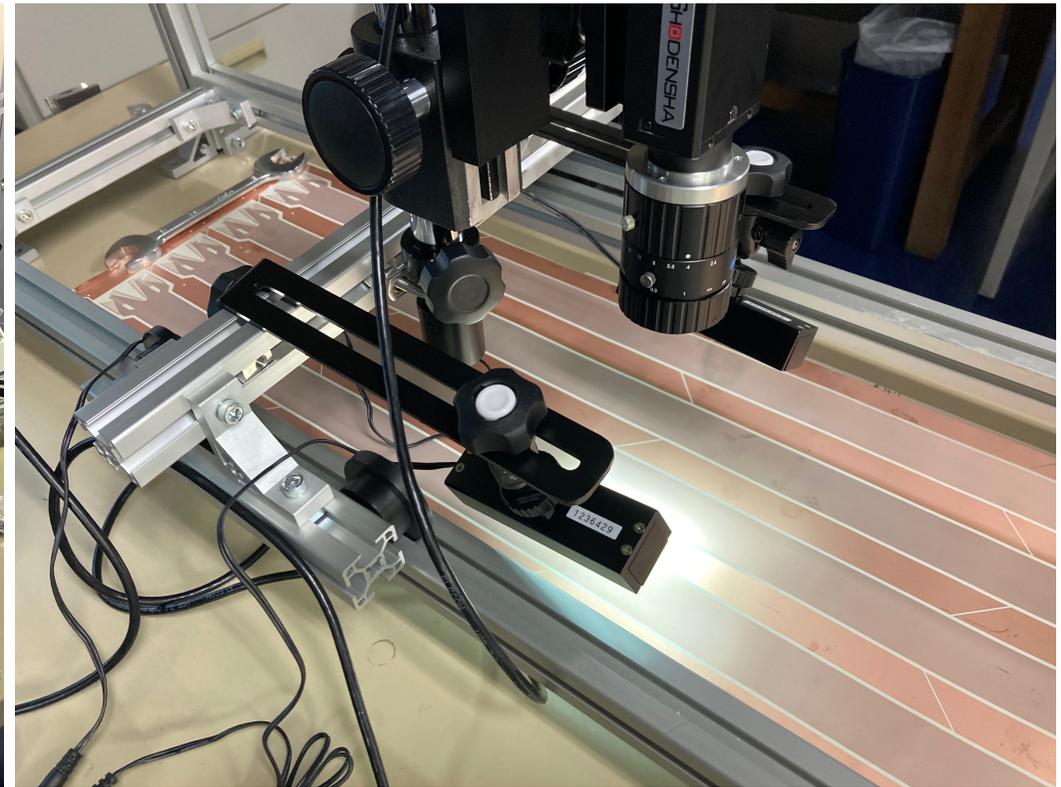
Data taking by Hikaru Imai

Bus Extender Production Schedule

- 1.1m Bus Extender Pre-Production has started.
- Due to the budgetary constraint, we have to wait for next batch until the delivery in the next fiscal year (April).
- If we are luckily offered gift by \$0.1M, we can process batch-1 production sooner. ➡
- The cost of production heavily relies on the yield rate.



Yield Issues of Bus Extender Production



Developing semi-automated signal layer pattern checking system by Y. Nakamura and H. Imai (Rikkyo Univ.)
We will install the system in the factory (Print Electronics Laboratory co.) next week and test for the 20 preproduction cables. To be reported by students in near future.