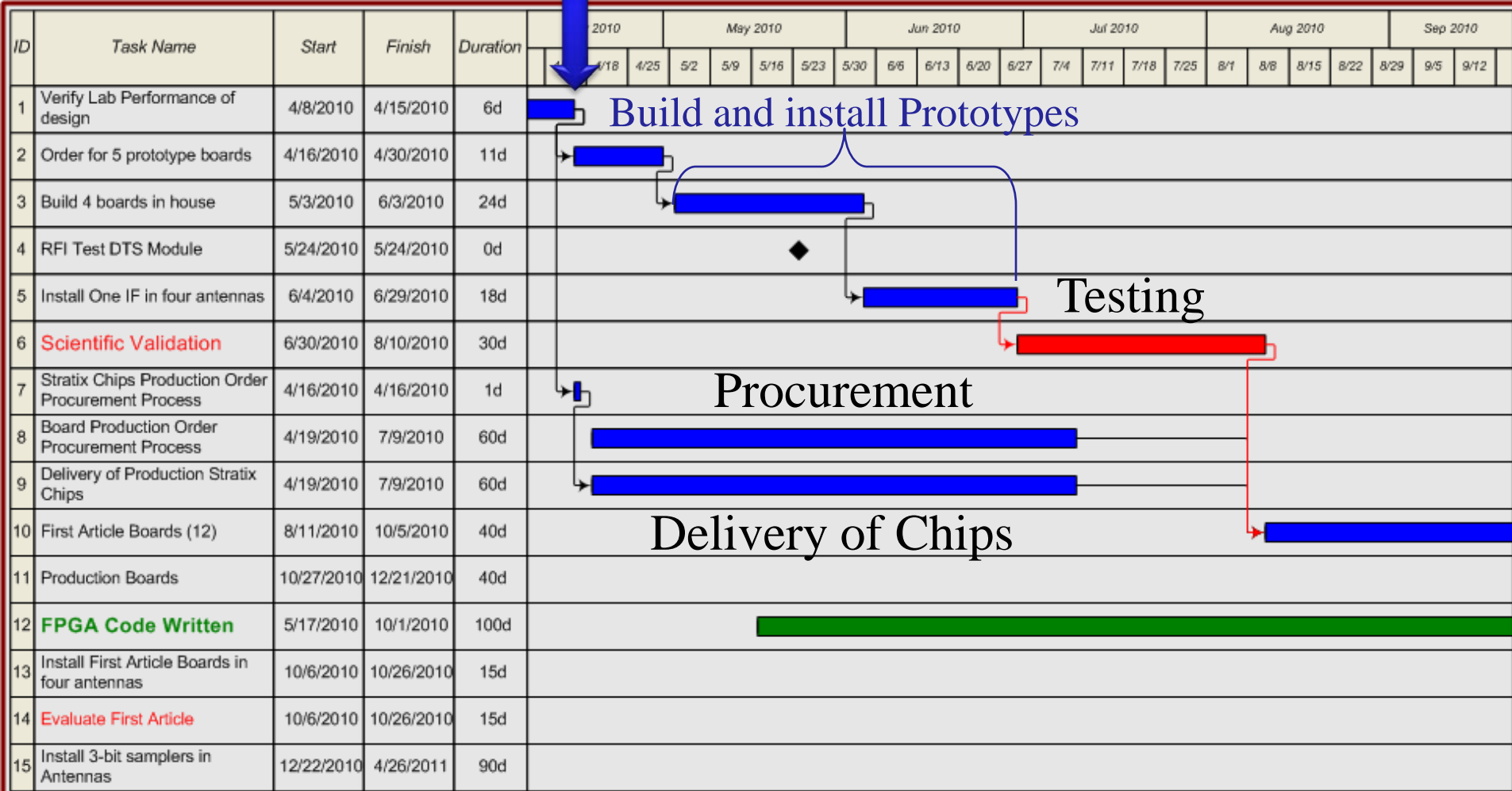


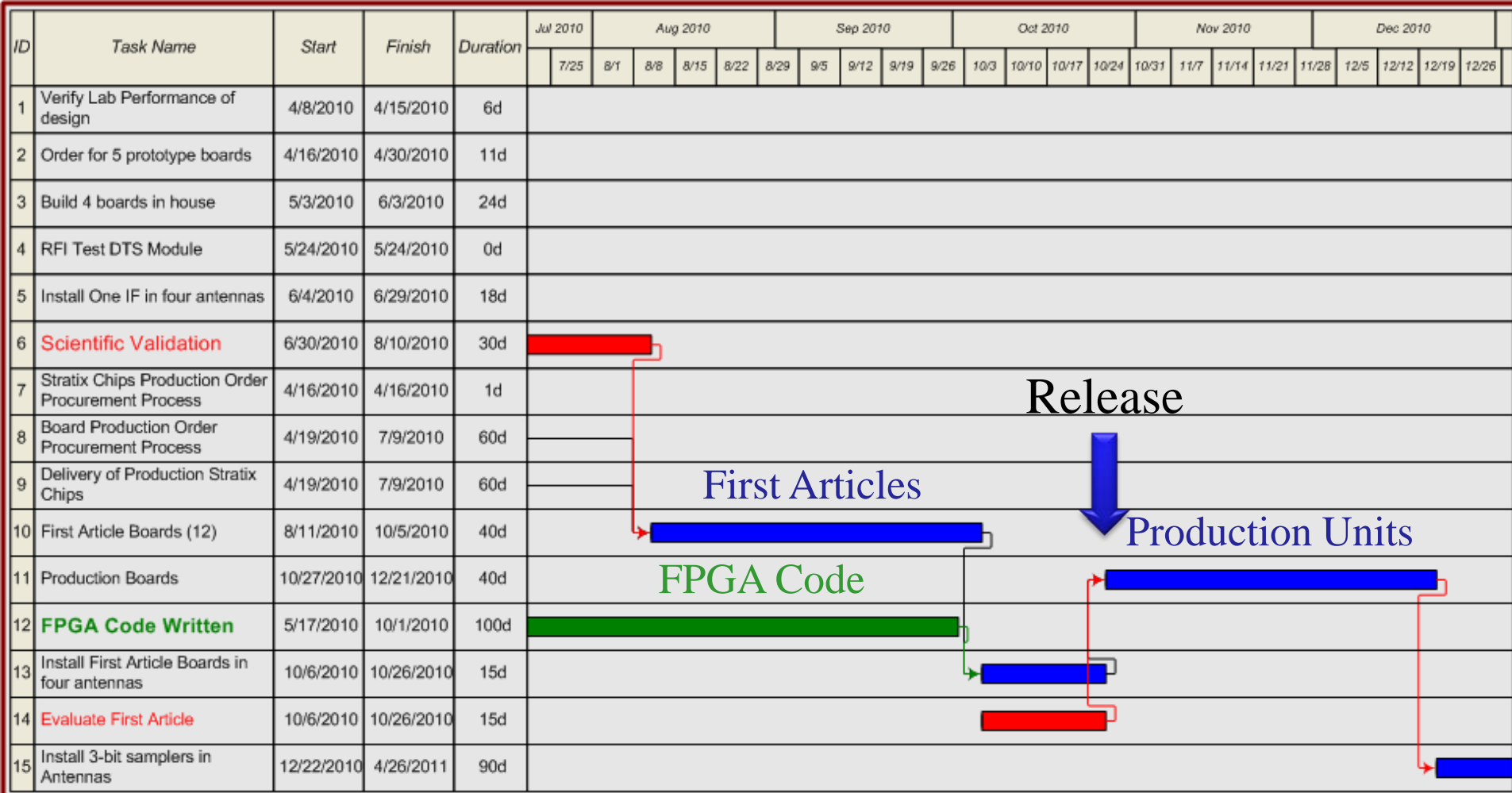
3-bit Implementation Meeting

Charge:

Identify all requirements and implications to install the 3-bit sampler on all antennas by May 2011

Place Orders





FPGA Code in DTS

Code **cannot** be upgraded remotely

Design of the DTS modules requires module to be removed and opened up to reprogram formatter FPGA code

Therefore the FPGA code **must** be finished prior to retrofitting of the DTS modules

Not applicable for initial four modules

Dedicated personnel to finish writing code is needed

Installation

Two antennas every week

Remove old modules, Install new DTS modules with 3-bit samplers
Update L305 module, install cables

Two teams of three people to install

Supervisor

Fiber/DTS Tech

LO Tech

Dedicated personnel to upgrade modules in lab

3-bit DTS Life Cycle

- Remove DTS modules from Antenna Tue
- Remove RFI shell
- Add/Replace square support rods
- Install 3-bit sampler, power supply, and 3-bit M&C circuit boards Wed
- Replace 8-bit sampler heat sink and backplane
- Install Isolation amplifier and wire power
- Power up sampler, check power, Program Boards and add Serial Numbers to circuit boards Thu/Fri
- Label front cover and put on test bench, burn in
- Analyze results, perform final checks, close up/re-install RFI shell Fri/Mon
- Ready to be installed on Antenna Tue

Antenna

IF's	D302	IF's	D304
B ₀	27	D ₀	39
B ₁	29	B ₂	41
D ₁	31	D ₂	43

Down Converters
A ₀ A ₁ A ₂
B ₀ B ₁ B ₂
C ₀ C ₁ C ₂
D ₀ D ₁ D ₂

IF's	D301	IF's	D303
A ₀	21	C ₀	33
A ₁	23	A ₂	35
C ₁	25	C ₂	37

WIDAR

IF's	D301	IF's	D303
A ₀	21	C ₀	33
A ₁	23	A ₂	35
C ₁	25	C ₂	37

IF's	D302	IF's	D304
B ₀	27	D ₀	39
B ₁	29	B ₂	41
D ₁	31	D ₂	43

Requirements

Manpower

Must use Correlator and Fiber group to assemble and install modules

Need experienced 1 FTE for DTS assembler/installer

Need experienced 0.5 FTE for writing DTS FPGA Code

Equipment

Stand alone DTS Test rack capable of analyzing 4 modules simultaneously

Need 2 mini-Laptops, transport carrier

Implications

Schedule

May not be able to replace fiber risers as scheduled

Dedicated personnel means they cannot be used for other projects. **Experienced** personnel means they require minimal training

VLBA Outfitting of DBE should be complete by Dec 2010

Maintenance days should be every Tuesday during installation period. **If installation does not occur for any reason, the schedule slips until the next week.**

Two dedicated NRAO vehicles for installation on maintenance days

Summary

Commitment

Correlator commissioning may drive 3-bit Schedule

It is possible the schedule can be met with dedicated manpower and assets identified ..however...

Risks

Multiple possibilities to delay installation schedule

Impact on new projects is likely