STRUCTURE OUTLOOK

COMMENTS

990127

ISG3@SLAC
N. Toge

[1] FUTURISTIC ONE

- EVENTUALLY WE WILL HAVE TO BUILD A FULL SET HARDWARE FOR ONE LEG OF DLDS OCTOPUS.
- 8 KLYSTRONS + MODULATORS
  2 LONG WAVEGUIDES (IF 2x2)
  12 STRUCTURES (IF 4x3)
- TIMESCALE : 2002 - 2003
- PURPOSE: HIGH POWER DEMO.
- MANY QUESTIONS
  WHERE?
  WHO?
  USE BEAM? etc etc

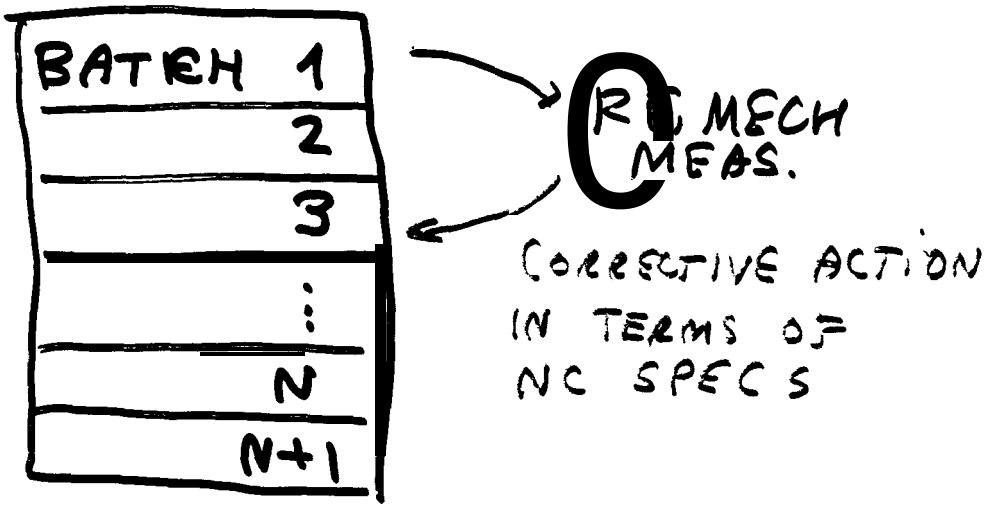
- BUT INDEPENDENT OF THESE OUR PRODUCTION CAPABILITY HAS TO GROW TO BE COMPATIBLE WITH THIS.

SOMETHING TO KEEP IN MIND

[2] NOT-SO-FUTURISTIC ONE.

RF/MECH QC OF DISKS

[A] FEED-FOWARD



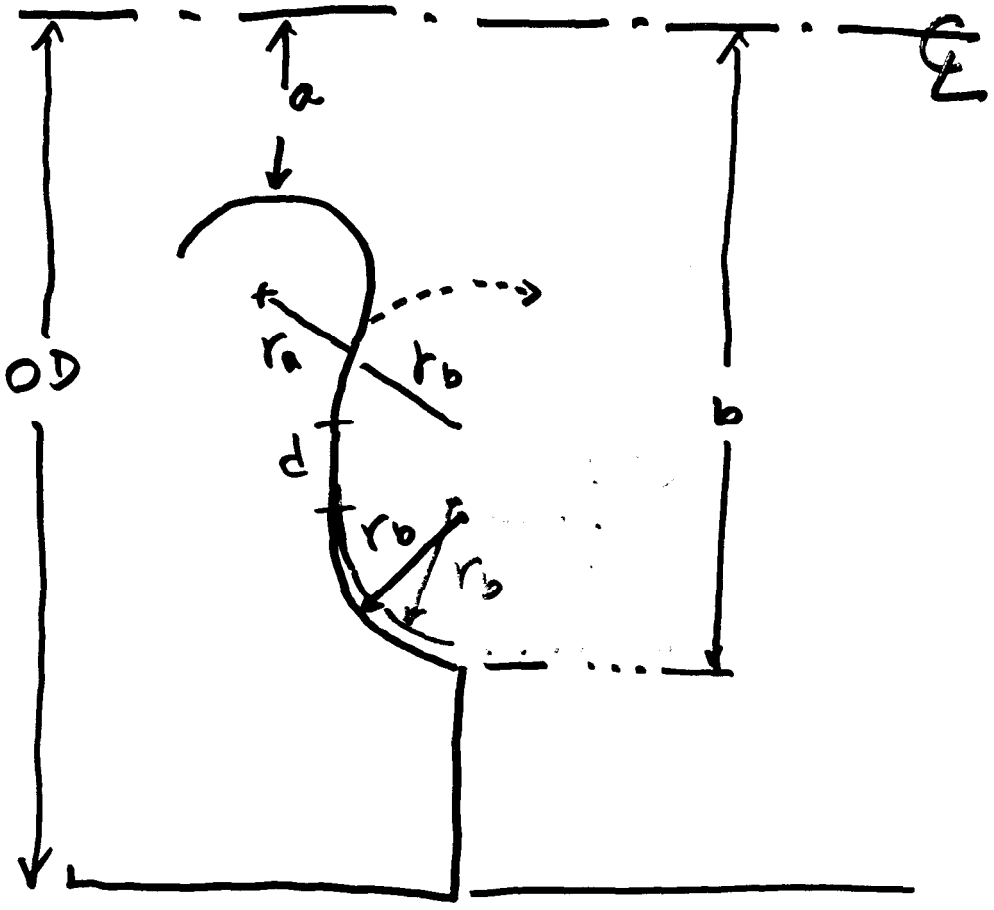
[B] FEED-BACK

BATCH 1	MACHINING → RF QC → MACHINING
2	A → QC → B
3	A → QC → B
⋮	
N	A → QC → B
N+1	A → QC → B

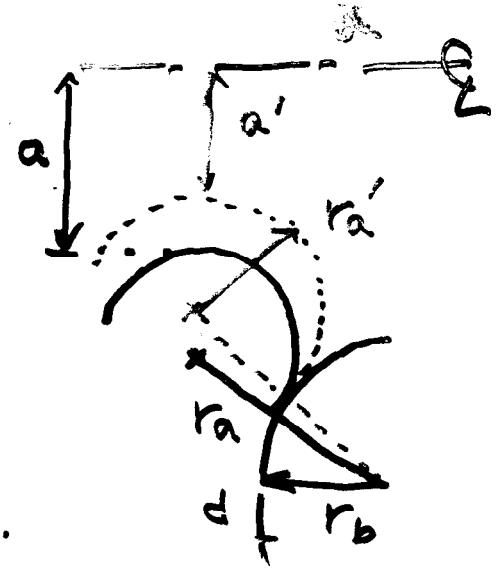
I AM AFRAID [B] IS BETTER AT THIS MOMENT, BUT CAREFUL DISCUSSIONS ARE REQUIRED AMONG THE PEOPLE

PRACTICAL ISSUES WITH SCHEME [B].
(ACTUALLY THE SAME APPLY TO [A]).

- ASSUMING WE HAVE GOOD CONTROL OF Δf VS $\Delta a, \Delta b$



- TRIMMING 2b IS RELATIVELY STRAIGHTFORWARD (IT LOOKS TO ME)
  NO CHANGE TO r_b.
  CHANGE TO d.
- TRIMMING 2a SHOULD BE POSSIBLE, BUT LOOKS TRICKY.
- CAN WE GET AWAY WITH TRIMMING 2b ONLY? TIME EQUIPMENT...



WHAT I WOULD LIKE TO REQUEST

- WANT TO ACCUMULATE MATERIALS SO THAT WE CAN MAKE AN INTELLIGENT DECISION ON [A] VS [B] CHOICE.
  - ⊙ TOLS ON Δf_0, Δf_1
  - ⊙ MATRIX $\begin{pmatrix} \Delta f_0 \\ \Delta f_1 \end{pmatrix} = M \begin{pmatrix} \Delta a \\ \Delta b \end{pmatrix}$

  ⇒ ⊙ EXPECTED ACCURACY/RESOLUTION OF RF QC MEAS.
  - FEEDBACK FROM ENGINEERING
  - PARTICULARY, REPRODUCIBILITY AND CONTROLLABILITY OF THE LATHE MACHINE
  - IMPACTS TO THE FORESEEN SCHEDULE AND EXPECTED PRODUCT QUALITY.
- LOTS OF WORK AND IT'LL TAKE TIME. BUT TASK ASSIGNMENT AND DEADLINES FOR REPORTS CAN BE MADE FAIRLY CLEAN, I THINK.