SVD Reconstruction

Phase2 Readiness

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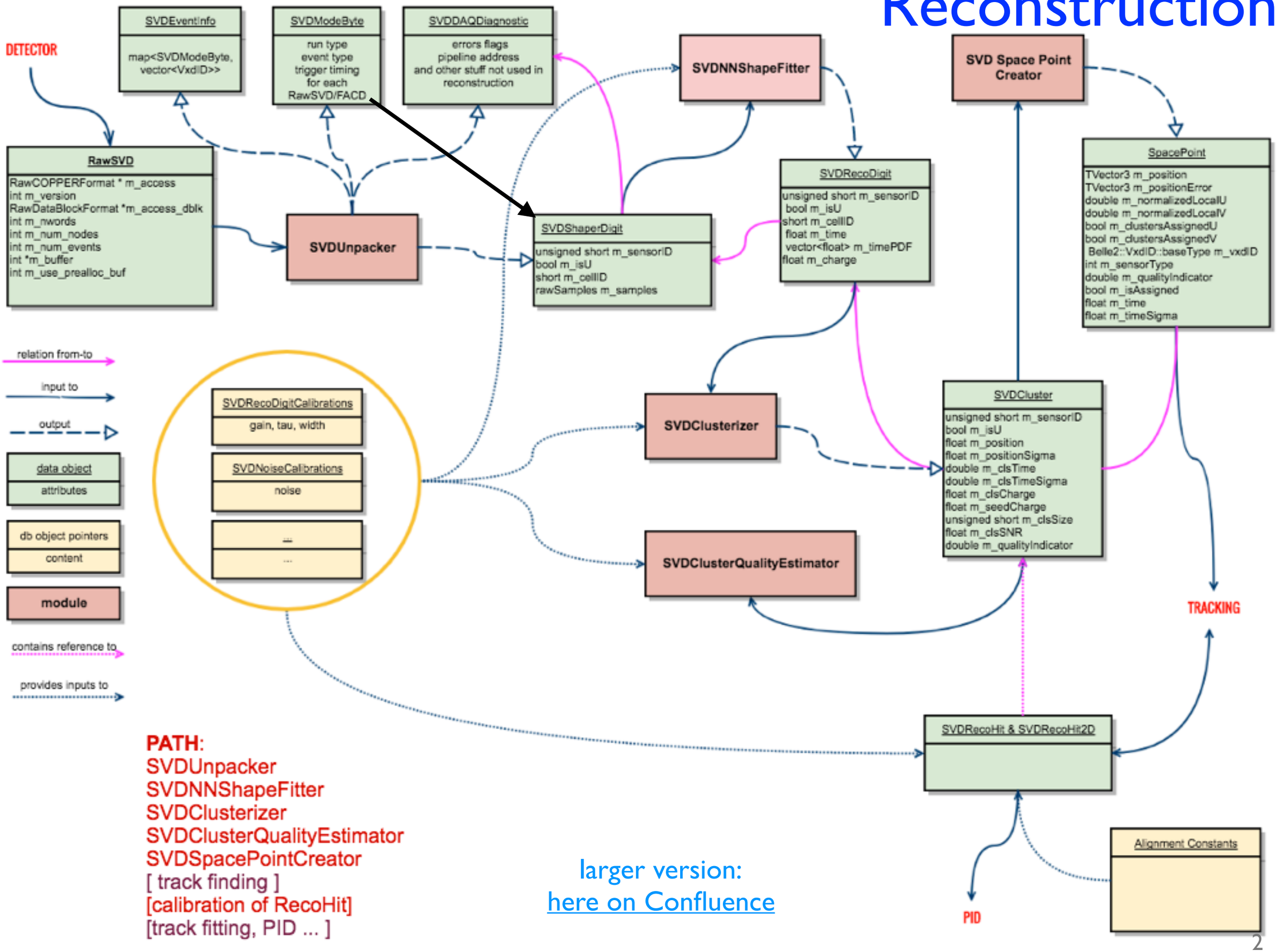
F2FTracking ~ September, 19th 2017

Reconstruction



PATH:
SVDUnpacker
SVDNNShapeFitter
SVDClusterizer
SVDClusterQualityEstimator
SVDSpacePointCreator
[track finding]
[calibration of RecoHit]
[track fitting, PID ...]

larger version:
here on Confluence

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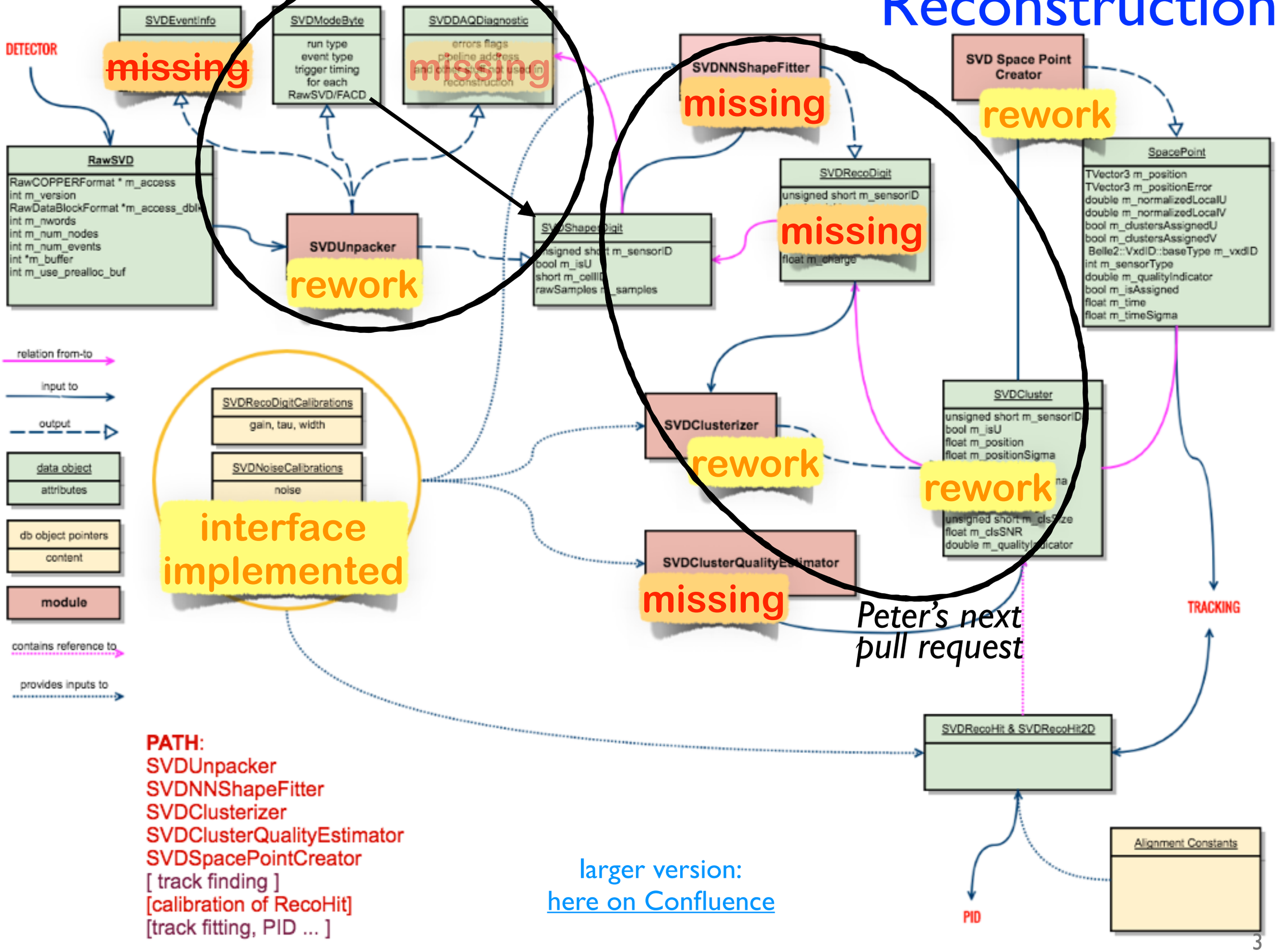

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Status of Calibration Framework

missing features	read rootfile from DB
future developments	add calibration objects (e.g. for the simulation)
documentation status	the code is documented
stress test on TB data	not yet
timeline	B2GM: define how to read rootfiles, implement it and test before next F2F tracking meeting, release-01-00-00
commitments	Laura Zani (Pisa)

Status of Calibration of the Simulation

under study	interstrip capacitance, charge collection
to be studied	APV25 time response, defects
documentation status	–
stress test on TB data	–
timeline	depending on refactoring, but currently using TB branch
commitments	A. Bozek, K. Latvani, M. DeNuccio

Status of Unpacking

critical

missing features	unpack 3 samples, unpack time hit info (SVDModeByte)
future developments	add online checks on data format
documentation status	data format on confluence, nothing on the algorithm
stress test on TB data	yes, but on 6 samples only
timeline	release-01-00-00
commitments	Jarek (Krakow) ?

Status of Time Determination

missing features	fit framework with NN-based algorithm (3, 6-samples)
future developments	add basic fitter (3, 6-samples)
documentation status	–
stress test on TB data	no
timeline	pull request at the B2GM, release-01-00-00
commitments	Peter Kv.

Status of Clusterizer

missing features	the module works (before refactoring)
future developments	include hit time information, use SVDShaperDigits
documentation status	–
stress test on TB data	yes, but some features to be understood
timeline	release-01-00-00
commitments	Peter Kv.

Status of SpacePoint Creator

missing features	use hit time information and charge to reduce ghosts
future developments	quality estimator
documentation status	–
stress test on TB data	yes
timeline	release-01-00-00
commitments	James Webb, Thomas Lueck

Road Map

(presented last week at the SVD offline software meeting)

	I	II	III	IV
August	• ConditionDB interface for data calibration DONE • SVDShaperDigit ALMOST • SVDModeByte DONE • SVDEventInfo TO DO	• SVDSpacePointCreator (no quality Indicator) TO MOVE	• SVDDAQDiagnostic TO DO • SVDUnpacker (3-samples) TO DO	• SVDRecoDigit TO DO • new SVDClusterizer TO DO
September	• SVDClusterQualityEstimator (no time info) • SVDUnpacker (sorting → removal of SVDDigitSorter) this week	F2F tracking: hit time determination status • SVDNNShapeFitter pull request	• SVDSpacePointCreator (quality Indicator, not time)	• SVDNNShapeFitter
October		• SVDClusterQualityEstimator (with time info)		• SVDSpacePointCreator (quality Indicator, with time)
November	release-01-00-00 branch	tuning & bug fix	tuning & bug fix	tuning & bug fix

- ➡ August was not a very productive month (well-deserved holidays)
- ➡ There is <u>no time left to post-pone the refactoring</u>
- ➡ For what concerns your involvement with the SVD software group, the refactoring must be your priority.
  - ‣ if you realise that you do not have time to accomplish your task within the deadlines, no problem, but we need to know it ASAP. Please communicate it to me and Andrzej.