

Tracker s/w: planning:

Tracker s/w; planning:

History: status at CM30

The past; at CM30:

- From C.Tunnel summary
 - Tracker team goal:

- S/w schedule for CM31

- At CM30, tracker software team leader:

– M. Aslaninedad

- Moved to another project later in the summer
- ... so KL took over ...

- This talk:

– Organization of s/w and beginning or regeneration of tracker s/w team

	Geometry	Space-points			Tracks	Man-Time w/o contingency
		MC	Data	Both		
Tracker	80% (needs documentation; 0.5 m)	40% Digitization (1-2m)	2m 40% Cabling in CDB 40% VLPC settings in CDB	60% 2m Clustering (ie. 3 planes)	50% (Kalman 6m-1y, Straight track test 2m, helical track test 2m) Code exists but requires KS tests and much cleanup.	1.5y - 2y
TOF	80% 0.5m (needs documentation)	30% Digitization (1.5m)	50% 3m Cabling/Calib. into CDB. Increase calib. bus factor and converge on calib.	80% 2m Clustering (model deadline)	30% 6m. Working prototype. Many hacks: own beamline geometry, own calibrations. No tests.	13m
EMR	70% (MiceModule limitations)	30% Digitization (in progress, 2m)	0% Calibration (2m) 0% Cabling (1m)	20% Clustering (2m)	0% Form PID (2m) 0% P_z (1m)	10m
KL	20% (not in standard geometry, not checked)	10% No reports from KL group nor usable/testable code. Existing standalone software just for occupancy; unusable for analysis.				3m - 6m?
CKOV	10% (wrong geometry/materials)	0% CKOV nonfunctional; under repaired. Blocks software work. Some routines exist but software very preliminary. Affects TOF resolution.				6m - 1y

Tracker s/w; planning:

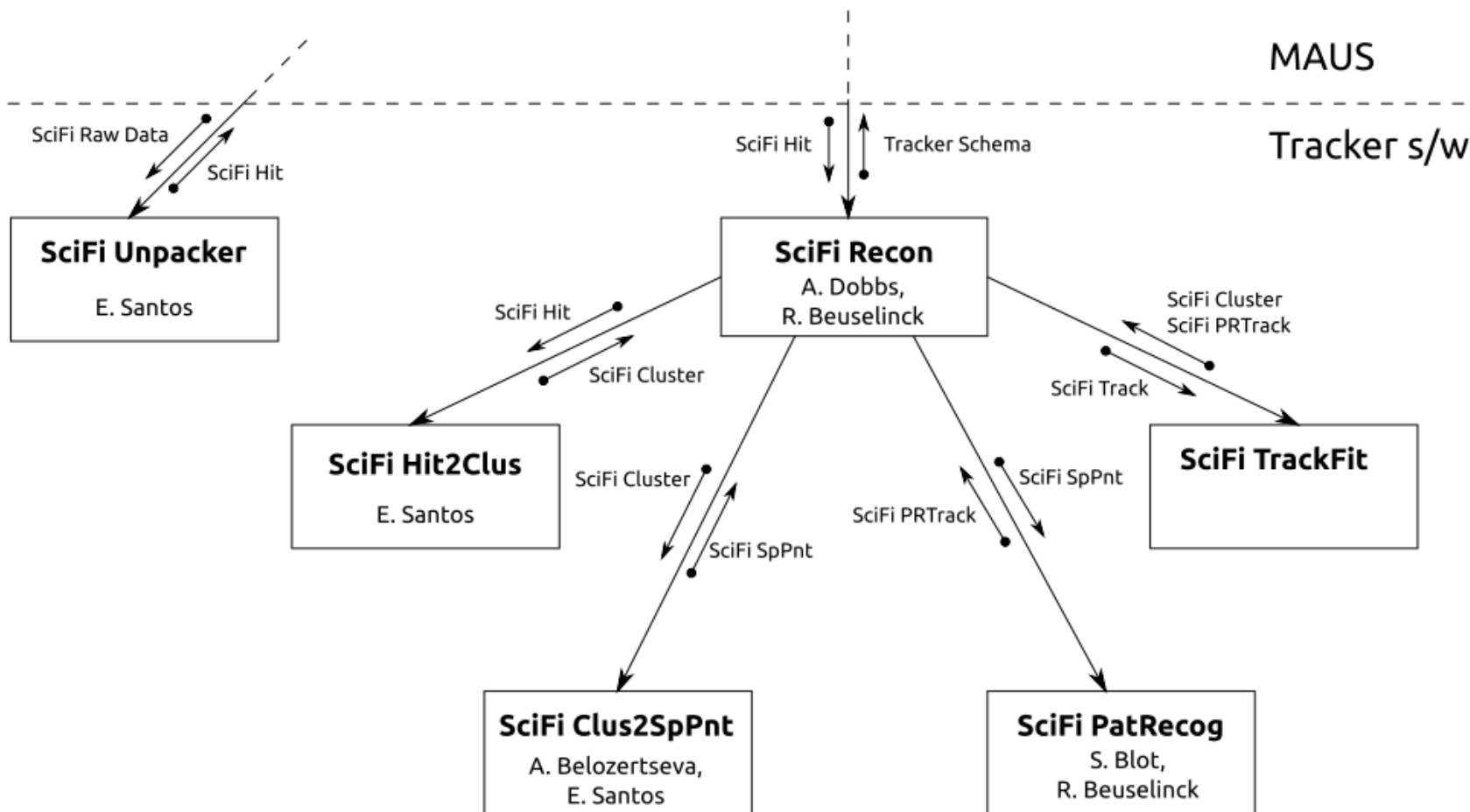
Tracker s/w:

program and data structure

Tracker reconstruction s/w; block diagram:

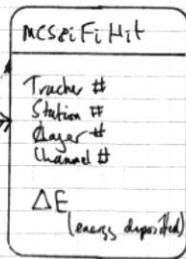
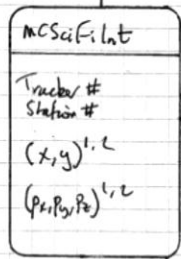
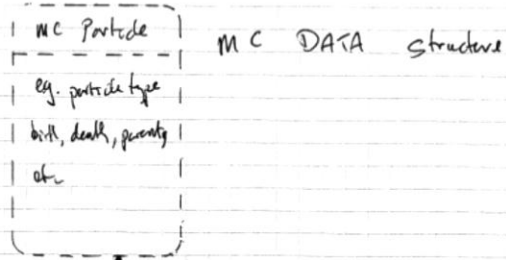
MICE Tracker Tree

14th Oct 2011

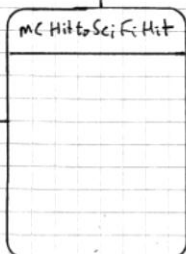
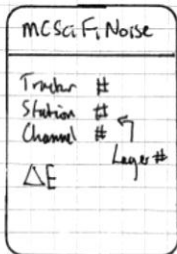


Probably need {SciFi Reclnit, SciFi RecTrm} as well

Tracker MC schema:



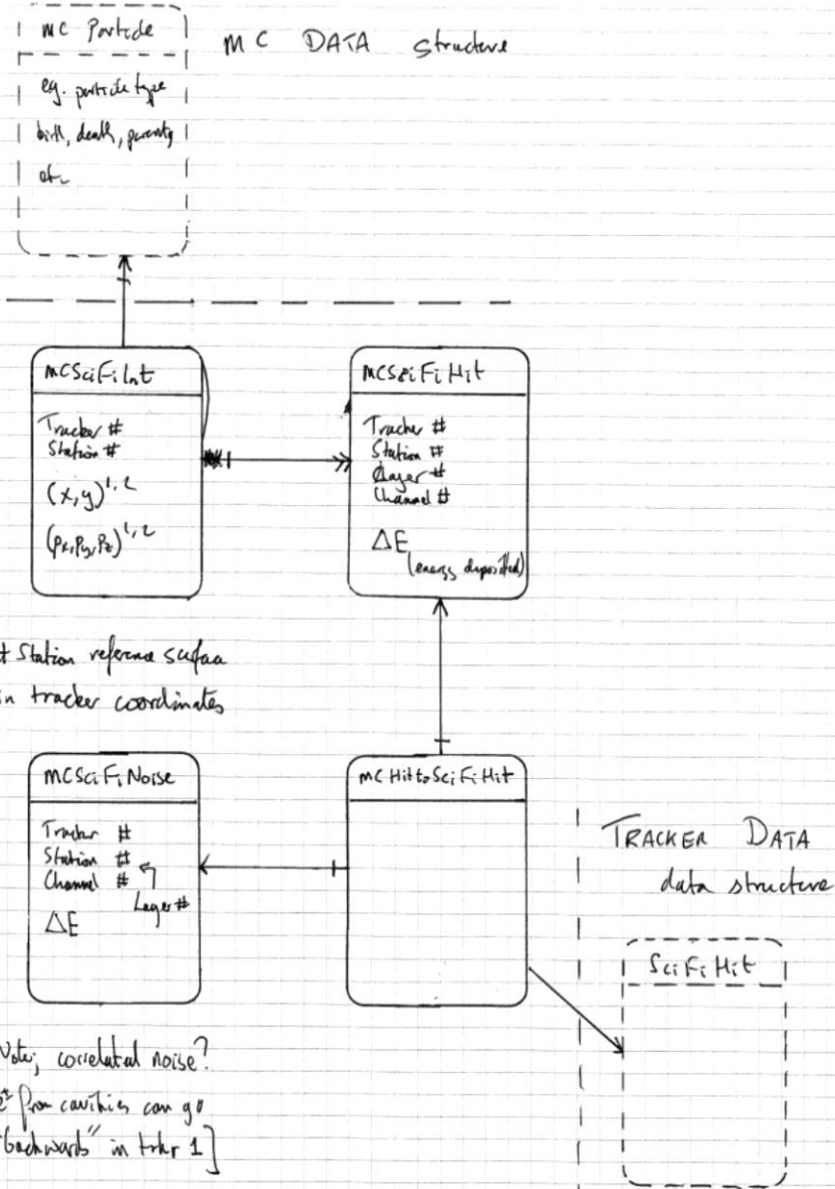
1, at Station reference surface
2, in tracker coordinates



TRACKER DATA data structure

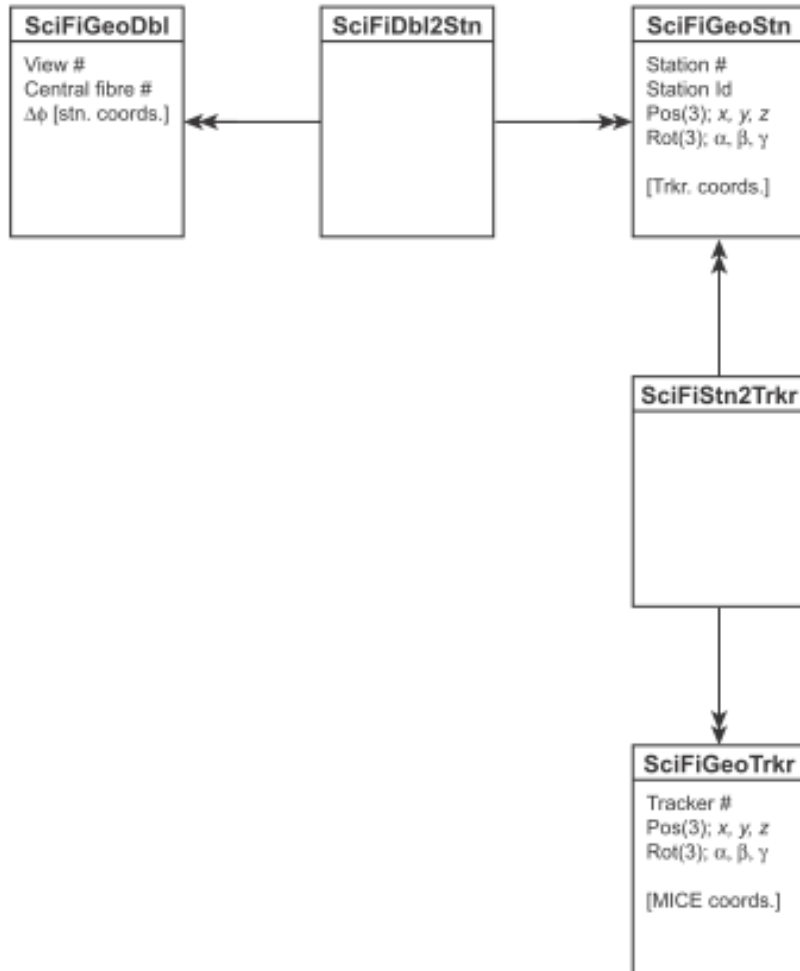


[Note: correlated noise?
e.g. from cavities can go
"backwards" in trkr 1]



Tracker GEOMETRY & CALIB schemas:

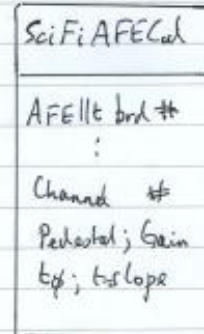
MICE tracker geometry schema



Note: α, β, γ Euler angles

Tracker calibration data structure

NO. 1305811
DATE



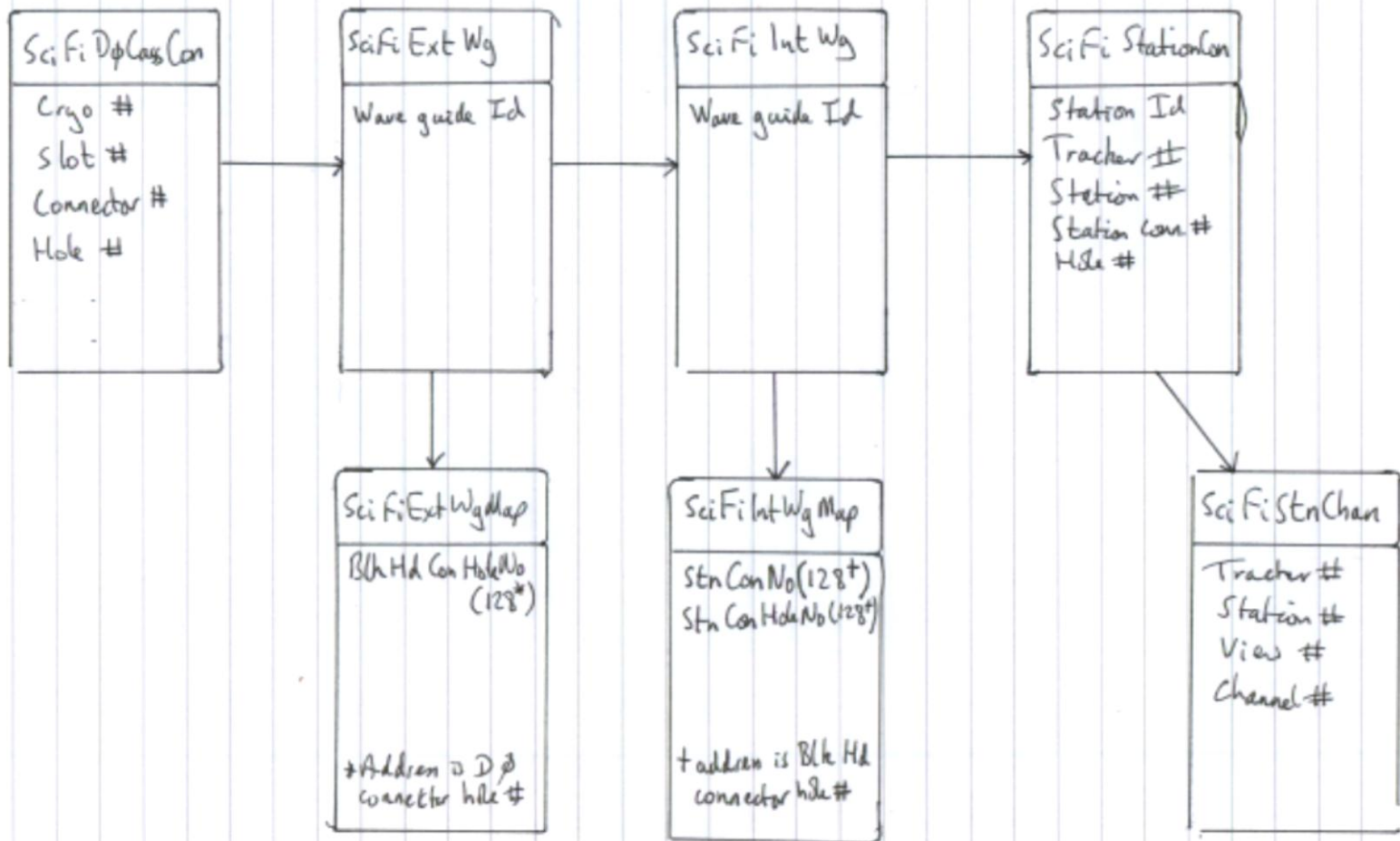
Tracker FIBRE MAPPING schema:

[D. Adey preparing electronic mapping schema]

24 Oct 11

Revision 0

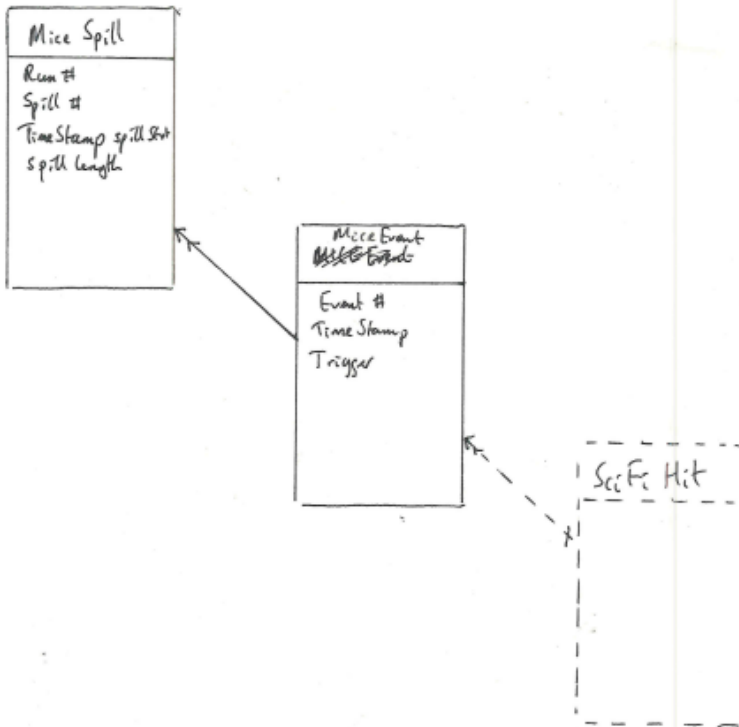
Sci Fi W/g map schema



MICE EVENT schema:

MICE Event Data Structure

30 Sep 11



Straw-man ...
under discussion

Time Stamp: YYYY mm DD:hh:mm:ss:.. - need to define fraction of second. Point of order is to allow setting: `so; trigger 'now' = 20110930100730.61...`

Tracker s/w; planning:

**Tracker s/w team
& development of schedule**

Tracker s/w team and the bones of the plan:

MICE Tracker Software

A. Dobbs, 26th Oct 2011

Adam Dobbs:

tracker s/w team leader

Task	Subtasks	Assignee1	Assignee2	Assignee3
Unpacking	Make functional	Santos		
	Migrate to official MAUS unpacker	Santos		
Geometry	Get correct	Lysenko	Long	
	Config DB interface	Littlefield	Lysenko	Long
Mapping	Get correct	Santos	Dobbs	
	Config DB interface	Santos	Dobbs	Wilson
Calibration		Dobbs	Santos	
Data structure	Definition	Long	Dobbs	
	Implementation	Dobbs	Santos	
Hits		Santos		
Clusters / Digits		Santos		
Spacepoints		Santos		
Pattern recognition	Straight	Blot	Belovtseva	Beuselinck
	Helical	Blot	Belovtseva	Beuselinck
Track fitting	Straight	Dobbs	Santos	Beuselinck
	Helical	Dobbs	Santos	Beuselinck
Visualisation		Santos	Robinson	
Monte Carlo	SciFi SD	Dobbs	Santos	Rogers
	Digitisation	Dobbs	Santos	Rogers
	Spacepoints	Dobbs	Santos	Rogers
Documentation		All		

Development of schedule:

- Principal tasks identified and team members assigned
- Schedule will now be developed;
 - **Constraint:**
 - Tracker s/w suite must be ready *at the latest* when Step IV data taking starts
 - **Interfaces defined:**
 - Allows parallel development of algorithms that depend on tracker s/w output
 - E.g. global track reconstruction
 - **Next “fixed point”:**
 - Tracker w/s 15—16 Dec11 @ RAL
- Milestones will follow when resource loaded schedule developed