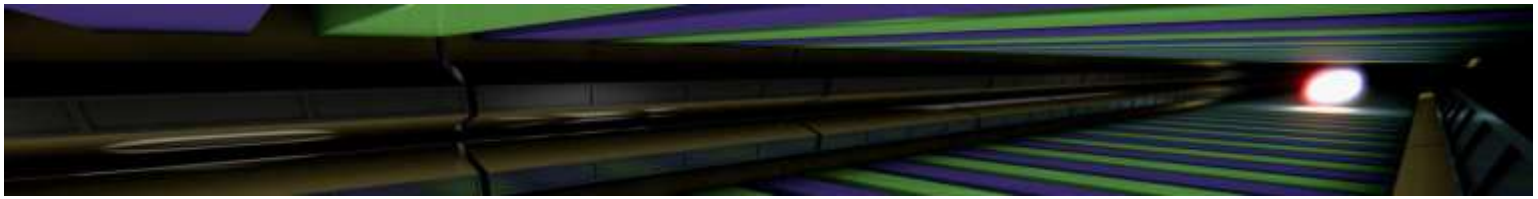

AMTF Cavity and Module Tests Data Flow

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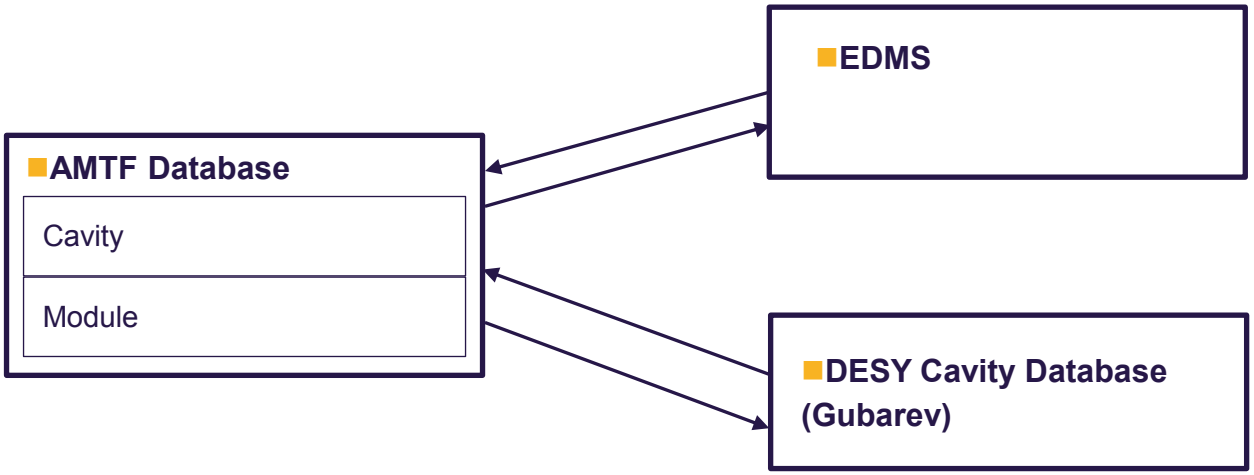
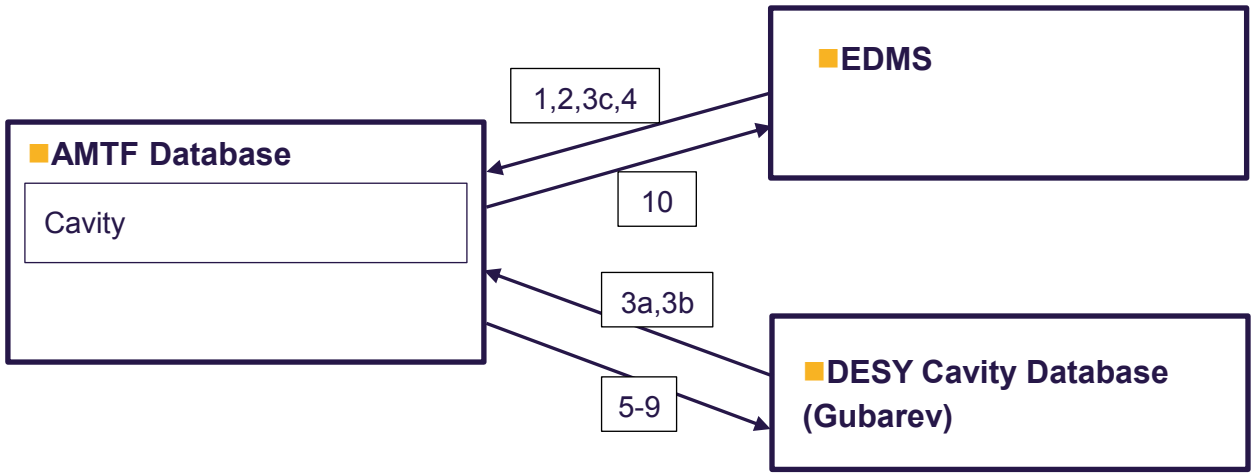
IFJ PAN

17.04.2012

AMTF Database



AMTF Cavity Tests



Data inflow

1. Planning information (*from EDMS)*
a) planned date and time of arrival, cavity No., Box No.
b) information that cavity left the producer

2. Verification that shock monitoring systems were switched on before transport (*from EDMS)*

3. Measurements of RF spectra and transmission
Source - received from Company Database
a) reference data – 9 fundamental modes frequencies
(from DESY Cavity Database)
b) reference data – pi mode atenuation (S21 transmission)
(from DESY Cavity Database)
c) incoming criteria – vacuum level and leak check
(*from EDMS)*

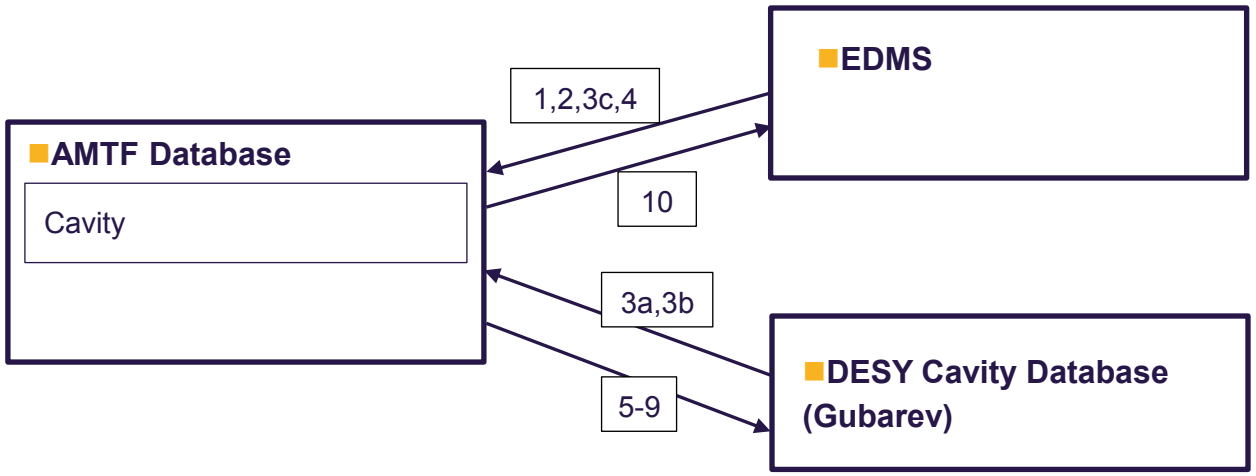
4. Check of HOMs, antennas and pick-ups
Short circuits checkup information (*from EDMS)*

Data outflow

5. Reception Measuring of RF spectra and transmission
Fundamental spectra measurements results
a) 9 fundamental modes frequencies
b) pi mode atenuation (S21 transmission)
(to DESY Cavity Database)

6. Tuning of HOM
a)Transmission S21 => Input to HOM2 for 9 frequencies
b)Transmission S21 => Pickup to HOM1 for 9 frequencies
c)Transmission S21 => Input to Pickup for 9 frequencies
d)Transmission S21 => Input to Pickup for 9 frequencies
Result as:
- 9 frequencies + S21 transmission
- array of 801 points
(to DESY Cavity Database)

AMTF Cavity Tests



Data inflow

1. Planning information (*from EDMS)*
a) planned date and time of arrival, cavity No., Box No.
b) information that cavity left the producer

2. Verification that shock monitoring systems were switched on before transport (*from EDMS)*

3. Measurements of RF spectra and transmission
Source - received from Company Database
a) reference data – 9 fundamental modes frequencies
(from DESY Cavity Database)
b) reference data – pi mode atenuation (S21 transmission)
(from DESY Cavity Database)
c) incoming criteria – vacuum level and leak check
(*from EDMS)*

4. Check of HOMs, antennas and pick-ups
Short circuits checkup information (*from EDMS)*

Data outflow

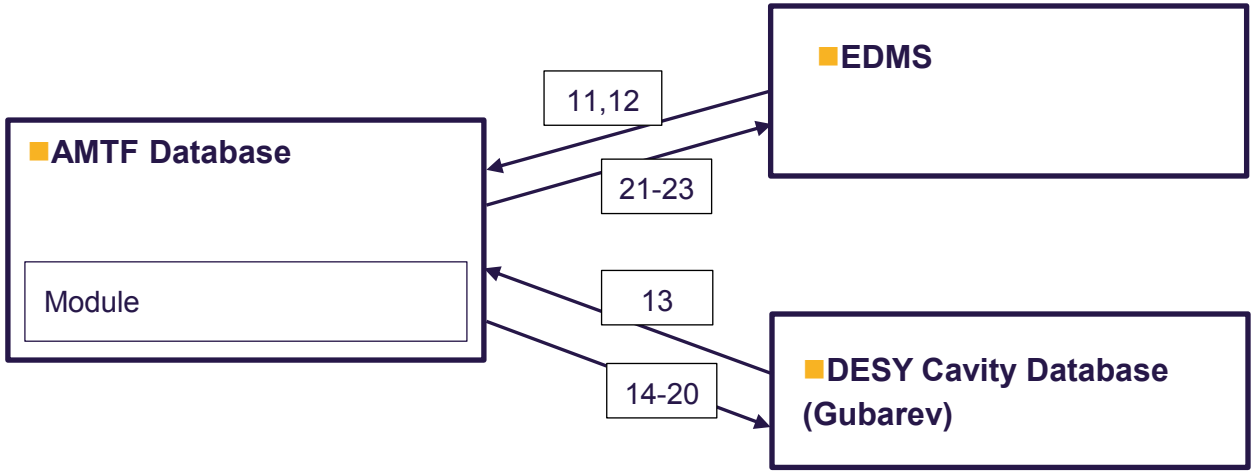
7. RF Cables Connection and TDR (Time Domain Refrectometer) check
a)Measured cables length + length difference after cavity connection
(to DESY Cavity Database)

8. Q(E) Measurements (Vertical Criostat Test)
Q(E) measurements results and parameters
(to DESY Cavity Database)

9. Departure Measuring of RF spectra and transmission
Fundamental spectra measurements results
a) 9 fundamental frequencies
b) pi mode atenuation
(to DESY Cavity Database)

10. Vacuum level and leak check measurements
(to EDMS)

AMTF Module Tests



Data inflow

11. Planning information (*from EDMS)*
a) planned date and time of arrival, module number
b) information that module left Saclay

12. Assembly and test protocol from Saclay (*from EDMS)*
a) cavity position in module
b) coupler name (warm, window, cold) for every cavity
c) magnet type and No.
d) current leads type and No.
e) tuners and piezos No.
f) BPM type
g) short circuits checkup information
h) verification that shock, beamline vacuum and coupler vacuum monitoring systems were switched on before transport
i) beamline vacuum level and leak check
j) coupler vacuum level and leak check
k) tuners check
l) HOM tuning check after roll-out

13. Reference data - 9 fundamental frequencies measured after assembly of the string *(from DESY Cavity Database)*

Data outflow

14. Measurement of the cavity fundamental mode spectra at 300K *(to DESY Cavity Database)*
15. Measurement of the cavity fundamental mode spectra at 2K *(to DESY Cavity Database)*
16. Measure the Qload vs. antenna positions using VNA *(to DESY Cavity Database)*
17. Measure HOMs spectra and Qload *(to DESY Cavity Database)*
18. Cryo-losses measurements *(to DESY Cavity Database)*
19. Qload, Kt callibration, Qload HOM at 1.3 Ghz measurements with low RF power *(to DESY Cavity Database)*
20. Single cavity flat-top measurements *(to DESY Cavity Database)*
21. Cryo module High RF Power and Heat Loads measurements *(to EDMS)*
22. Cold magnet HV and resistance test at 300K and at 2K results *(to EDMS)*
23. Magnet voltage drop test and heat-loads test results *(to EDMS)*