FT-ICR for MM8 (or 9?)

Aim is to extend the existing MM8 GUI with FT-ICR capabilities:

* there has to be a button to switch between FT-ICR and ToF-ICR mode
* FT-ICR mode means that the main analysis window is a plot showing the Fourier spectrum (dB against frequency).
* Configuration parameters of the FFT-Analyzer:
	+ Frequency range nu\_center +/- Span (maybe coupled to the expected frequency similar to ToF-ICR?)
* Already bought devices / devices planned to use (we have to check if we develop something like a base class if different devices should be used at different experiments):
	+ HITRAP: [Advantest R3131 Spectrum Analyzer](http://www.rohde-schwarz.com/en/product/r3131a-productstartpage_63493-8262.html) (LabVIEW 6.1 Driver available with a lot of configuration options, maybe some things like “Noise measurements” are also interesting)
	+ LEBIT: ?
	+ TRIGA-TRAP: ?
	+ CMU-TRAP: ?
* Planed measurement cycle:
	+ Run one complete PPG cycle to prepare the ions for the measurement
	+ The second last entry of the PPG is then probably a waiting time at which the FFT-Analyzer is performing the measurement
	+ The last entry is a waiting time which the FFT-Analyzer needs to process the data.
	+ In case of a two-trap configuration the measurement cycle has to be adjusted. Most likely two different cycles will be needed (one for the preparation of both ions and one for the continuous alternate measurement of both ion species). But this will be a second step.
* Analysis windows:
	+ Measured amplitude against frequency (FFT-spectrum from analyzer)
	+ Maybe a window showing the fitted FFT center frequency against measurement number
	+ In two-trap configuration: Center frequency against measurement number for both species and a window showing the ratio of both
* Saving of data:
	+ Data should be again saved binary by the MM6Archiver (the LV object)
	+ Should we save the raw data (time domain) or the analyzed data (frequency domain)? The first one is maybe too large but would allow more analysis options (option to check the frequency behavior for different acquisition times for the same measurement).
* Interface between MM8 C++ GUI and LV:
	+ Should not change much: The C++ will get just get the FFT data in the same format as the ToF-data used in ToF-ICR.