**Mean Reversion Screener – User Story**

**I**

* **Preliminary Market Filter**: Get rid of all stocks that have no chance of meeting the desired criteria.

Since the scanner’s initial filter will be applied to the whole market, we want to get rid of the majority of stocks and remain with a selected group, on which further calculations will be done continuously in order to obtain potential trade/entry signals.

* Upon pressing an "Update" button the scanner runs through all stocks on the exchange and fetches a list of those who meet certain criteria in terms of:
* ATR (Average True Range % of X time intervals),
* Relative Volume (% of Average Volume over a desired time frame – can be days, hours)
* % Change over the Last X time intervals (can be days, hours)

The optimal scenario here would be if the user can change these parameters in real-time.

**II**

* After it has narrowed down the market to a list of X stocks which meet the desired criteria, the software should continuously be monitoring several metrics on the list and providing the trader with Alerts whenever the parameters reach a defined (by the trader) value:
* Standard Deviation of the **Stock Price** from the **8-frame Exponential Moving Average** (multiple time frames, preferably 5-min, 15-min, 60-min, Daily?)
* Standard Deviation of the **8-frame EMA** from the **21-frame Exponential Moving Average**
* (included only for science) Standard Deviation of the **Stock Price** from the **VWAP**
* For the VWAP Standard Deviation only intraday data should be utilized (only for 1 day, only market open to market close)

For the Standard Deviation from EMA calculations, on every different time frame, the data used should be capture a total of **X most recent trading sessions**.

(add paranmeter for max values)

* The trader should be able to modify Standard Deviation requirements on every different time frame in real-time (for all **X** different STDs)

**III**

* **Alert Window**: There should be a console where **Trade Signals** (all criteria are met for a ticker) appear as a list which continuously “updates” intraday. A pop-up window when an alert is triggered would also be beneficial.

The idea with the list is to have a list of all alerts triggered for the day in case the trader was AFK.

**Suggested format:**   
AAPL is ready to go: **Price/8-EMA** value X; **8-EMA/21-EMA** value Y; **VWAP StDev** value Z;  
**Relative field value**: x% of X intervals on Daily/Hourly;

**Relative Volume**: y% of Y intervals on Daily/Hourly;

Another option would be to have a database where signals are stored automatically. It would have to store the values entered by the trader for both the Initial Screener and the Trade Signal screener, and additionally the values of the St Deviations at the time of the signal (all time frames of interest).