

## Change request log CR #1

- **Concept Location**

Step #	Description	Rationale
1	We ran the system	
2	Checked the web console, Network section, and found the class MiscDwr and DataPointDwr containing the method doLongPoll() and getHistoryTableData(), which is responsible for fetching the required data	Identified the entry point for data retrieval..
3	Reviewed the doLongPoll() and getHistoryTableData() method to locate where the data was processed	To determine how values were being retrieved and updated.
4	Found a relevant section in doLongPoll() handling pointDetailsState, which calls dataPointDetailsDwr.getPointData(). Found a relevant function getHtmlText() which is responsible for rendering the values.	This method retrieves point data that includes numeric values.
5	Navigated to dataPointDetailsDwr.getPointData() and identified that it calls setPrettyText().	This function processes and formats the data before display
6	Traced setPrettyText() to BaseDwr class and found it calls Functions.getHtmlText().	This was the final step before rendering numeric values.
7	Located getHtmlText() in the Functions class and determined that modifications should be applied here.	This method constructs the HTML representation of the numeric values. We confirmed this class had to be modified

**Time spent (in minutes): 90**

Classes and methods inspected:

1. /src/com/serotonin/mango/web/dwr/MiscDwr.java -> MiscDwr.doLongPoll(int pollSessionId)
2. /src/com/serotonin/mango/web/dwr/DataPointDetailsDwr.java -> DataPointDetailsDwr.getHistoryTableData(int limit)
3. /src/com/serotonin/mango/web/dwr/DataPointDetailsDwr.java -> dataPointDetailsDwr.getPointData()
4. /src/com/serotonin/mango/web/dwr/BaseDwr.java -> BaseDwr.setPrettyText(WatchListState state, DataPointVO pointVO, Map<String, Object> model, PointValueType pointValue)
5. /src/com/serotonin/mango/web/taglib/Functions.java -> Functions.getHtmlText(DataPointVO point, PointValueType pointValue)

## ● Impact Analysis

Step #	Description	Rationale
1	Identified dependencies between <code>getHtmlText()</code> and <code>setPrettyText()</code> .	To ensure changes did not affect unintended parts of the application
2	Verified how <code>getHtmlText()</code> was used across the application	Ensured modifications wouldn't impact other components.
3	Assessed if truncation should be applied before or within <code>getHtmlText()</code> .	Decided to implement truncation within <code>getHtmlText()</code> for consistency.
4	Reviewed UI updates to confirm how changes would be reflected in real-time polling	Prevented discrepancies in displayed values

### Time spent (in minutes): 55

Classes and methods inspected:

6. `src/com/serotonin/mango/web/taglib/Functions.java` -> `getHtmlText(DataPointVO, PointValueTime)`
7. `src/com/serotonin/mango/web/dwr/BaseDwr.java` -> `setPrettyText(WatchListState, DataPointVO, Map<String, Object>, PointValueTime)`
8. `src/com/serotonin/mango/web/dwr/DataPointDetailsDwr.java` -> `getPointData()`

## ● Prefactoring (optional)

Step #	Description	Rationale
1	<i>N/A</i>	<i>N/A</i>

## ● Actualization

Step #	Description	Rationale
1	Created a helper function <code>truncateNumericValue(String text)</code>	Ensured that double values displayed only two decimal places.
2	Updated <code>getHtmlText()</code> to call <code>truncateNumericValue()</code> .	Applied truncation to formatted numeric values before rendering
3	Verified that other numeric values displayed correctly after truncation	Ensured no unintended side effects.
4	Conducted unit tests and UI validation.	Verified correct truncation and consistent data display.

### Time spent (in minutes): 30

Classes and methods changed:

9. `src/com/serotonin/mango/web/taglib/Functions.java` -> `getHtmlText(DataPointVO, PointValueTime)`
10. Implemented new method -> `truncateNumericValue(String text)`

- **Postfactoring (optional)**

Step #	Description	Rationale
1	N/A	N/A

- **Validation**

Step #	Description	Rationale
1	Checked UI updates for real-time values	Ensured truncated values remained consistent.

**Time spent (in minutes): 30**

- **Summary of the change request**

Phase	Time (minutes)	No. of classes inspected	No. of classes changed	No. of methods inspected	No. of methods changes
Concept location	90	4	0	5	0
Impact Analysis	55	3	3	3	0
Prefactoring		N/A	N/A	N/A	N/A
Actualization	30	1	1	1	1
Postfactoring		N/A	N/A	N/A	N/A
Verification	30	3	0	3	0
Total	205	11	4	12	1

- **Conclusions**

This change request required modifying the `Functions.getHtmlText()` method to apply decimal truncation of numeric values before rendering. The challenge was to determine where truncation should occur to maintain consistency across real-time updates. Debugging and validation ensured the changes did not impact other functionalities of the Mango application.