

## What-If System

### ATD-2 Team

#### **Abstract**

The What-If System is meant to be a “sandbox” to be able to view the potential impact of system wide changes on the tower side and metering decisions on the ramp side without actually making changes to the system. The What-If System is a tool within which with STBO, RMTC and DASH may be used such that proposed changes and updates can be made to determine their impact in isolation. The What-If System is a prototype tool, we welcome suggestions for improving the What-If utility. Improvements will be incorporated in later builds beyond phase-1 of ATD-2.

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# 1 Getting Started

To launch the What-If System:

**Step 1:** Hover over the green bar to launch menu Figure 1-1.

**Step 2:** Select the option for the What-If System.

**Step 3:** Wait for the What-If System. This may take a few minutes.



Figure 1-1 Hover over green bar to launch Menu

To Choose RMTC, STBO or DASH:

**Step 1:** Click on the What-If icon on the lower left corner of the display (

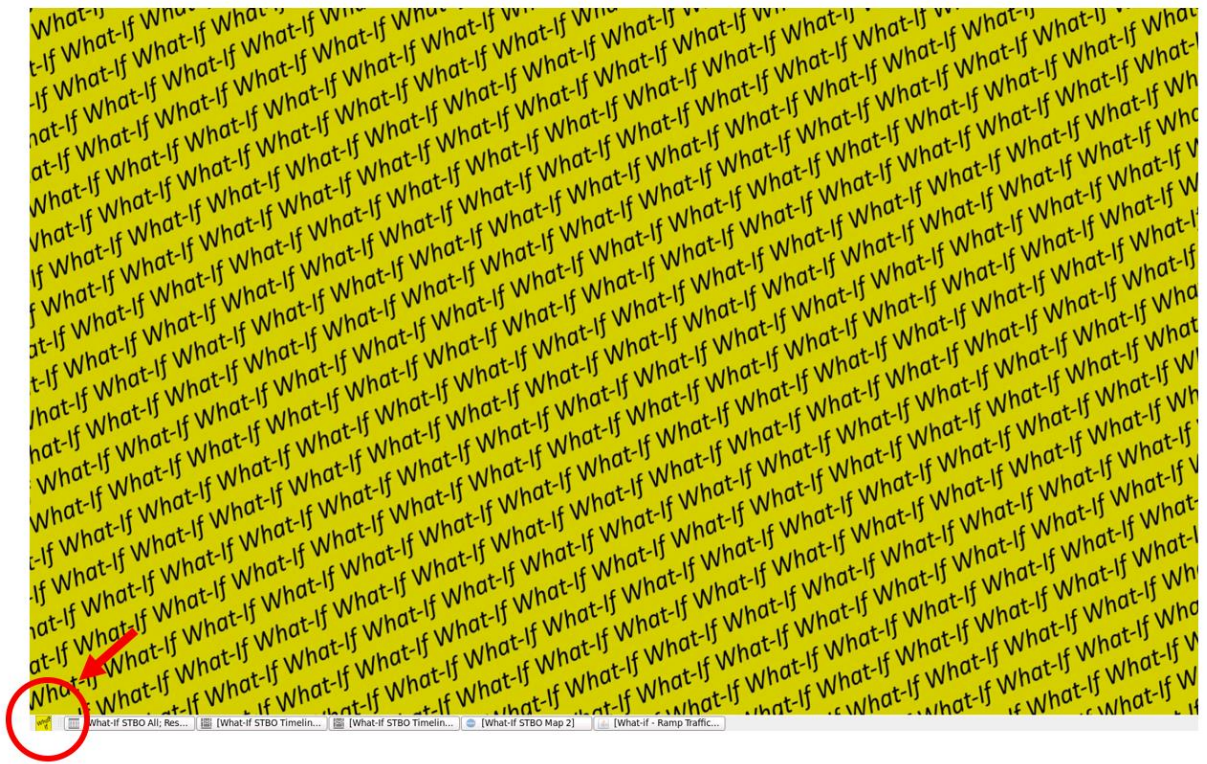
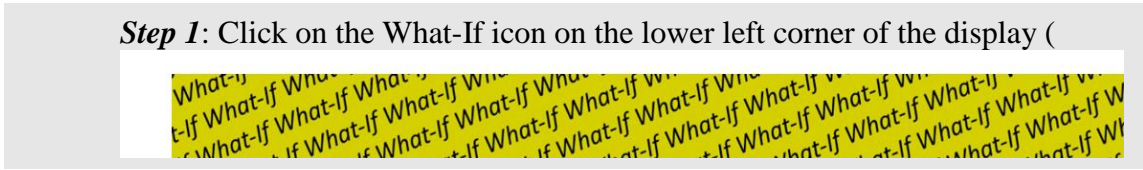
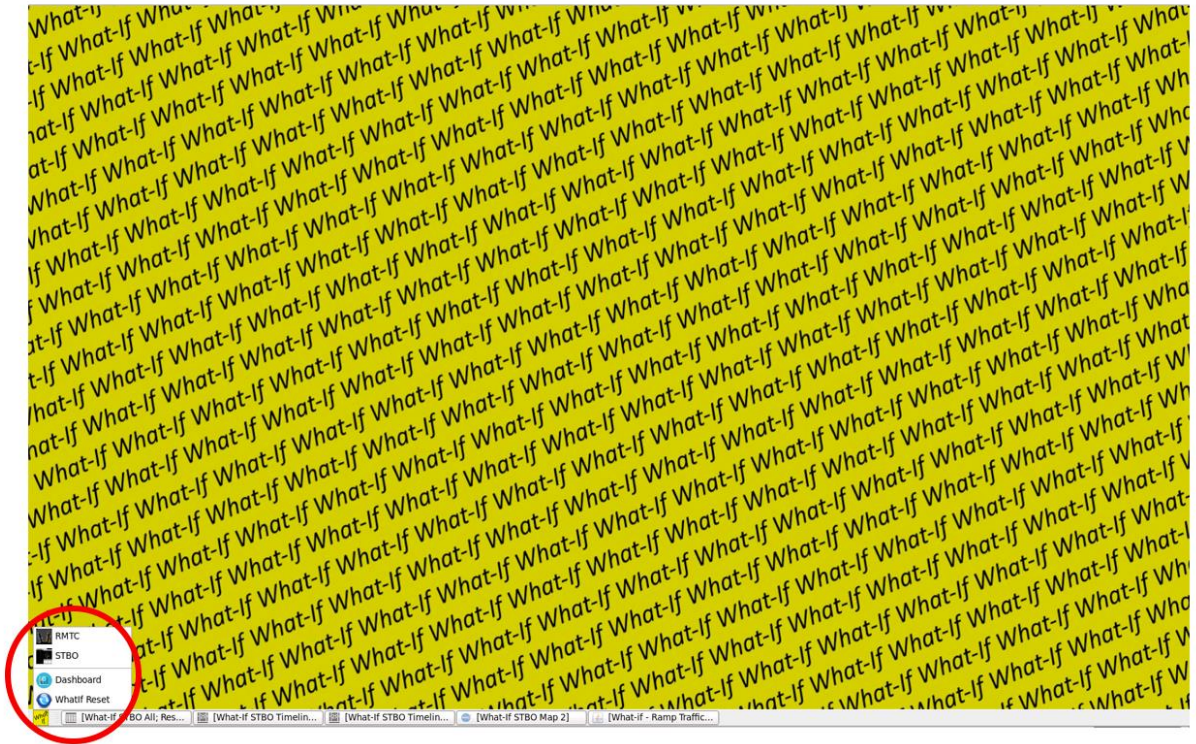


Figure 1-2 Click on What-If Icon to open What-If Option Menu



**Figure 1-3 Select RTMC, STBO, oe DASH**

## 2 What-If System

If the STBO Client, RMTC, or DASH are opened from within the What-If System, the title bars and desktop background will reflect that they are using the what-if system. If a client is already up and the user is unsure who had used the system last, it is recommended that they click the icon from the start menu labeled “What-If Reset” (Figure 3-1) that will re sync the client with the "operational system” .

The information that is synced up between the what-if system and the "operational" system is essentially runway flow information and TMIs. Actions on individual flight are not synced up between the “operational” and the what-if system. Also, automatic flow detection has been disabled on the What-If system so any change to runway utilization should persist to allow users to evaluate its effect on overall traffic. The DASH may also be opened via the start icon to view metrics to help inform their decisions.

The What-If System is a prototype tool, we welcome suggestions for improving the What-If utility. Improvements will be incorporated in later builds beyond phase-1 of ATD-2.

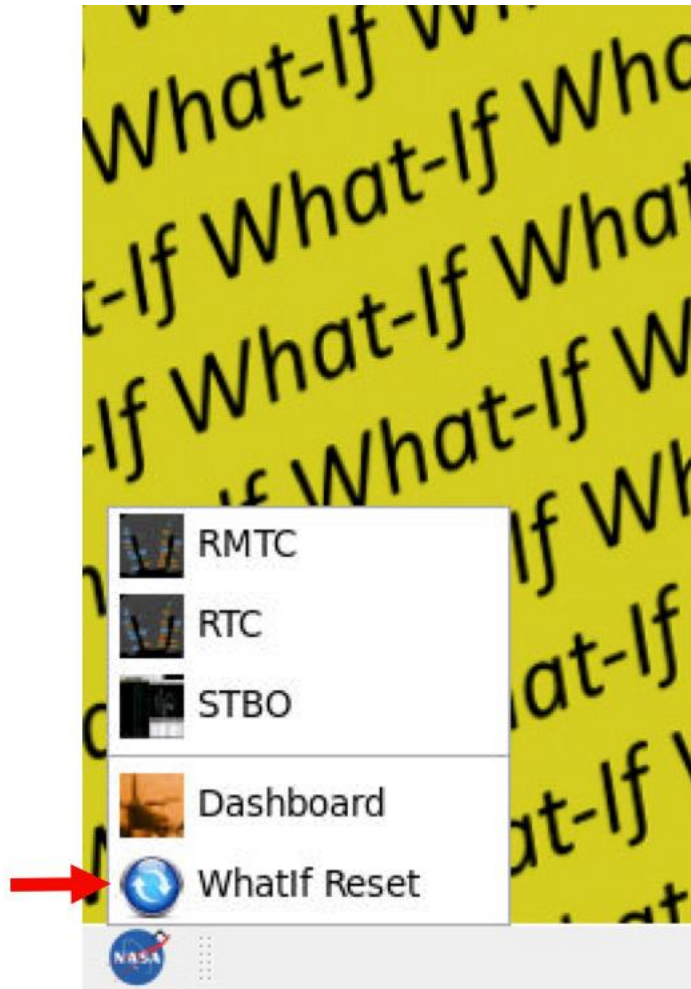


Figure 2-1 What-If Reset

### 3 What-If STBO Client

Open the STBO Client in the What-If System Figure 3-1 to be able to make changes on STBO and view the impacts on the system. The yellow What-If desktop background is in view behind the STBO client timelines, toolbar and map. What-If is also included in the title on the title bars of all the windows.



Desktop Background marked yellow *What-If*

Figure 3-1 STBO Clent What-If System

#### 4 What-If RMTc

What-if RMTc (Figure 4-1) can be used by ramp managers to potentially check the impact of the metering decisions. In order to do so, Open the RMTc in the What-If System to be able to make changes in RMTc and view the impacts on the system. The RMTc when opened, covers the entire desktop, so the yellow What-If desktop is not in view. What-If is included on the Ramp Manager Traffic tile bar. Changes made in the metering mode and or target queue time for AMA will be reflected in the what-if system.



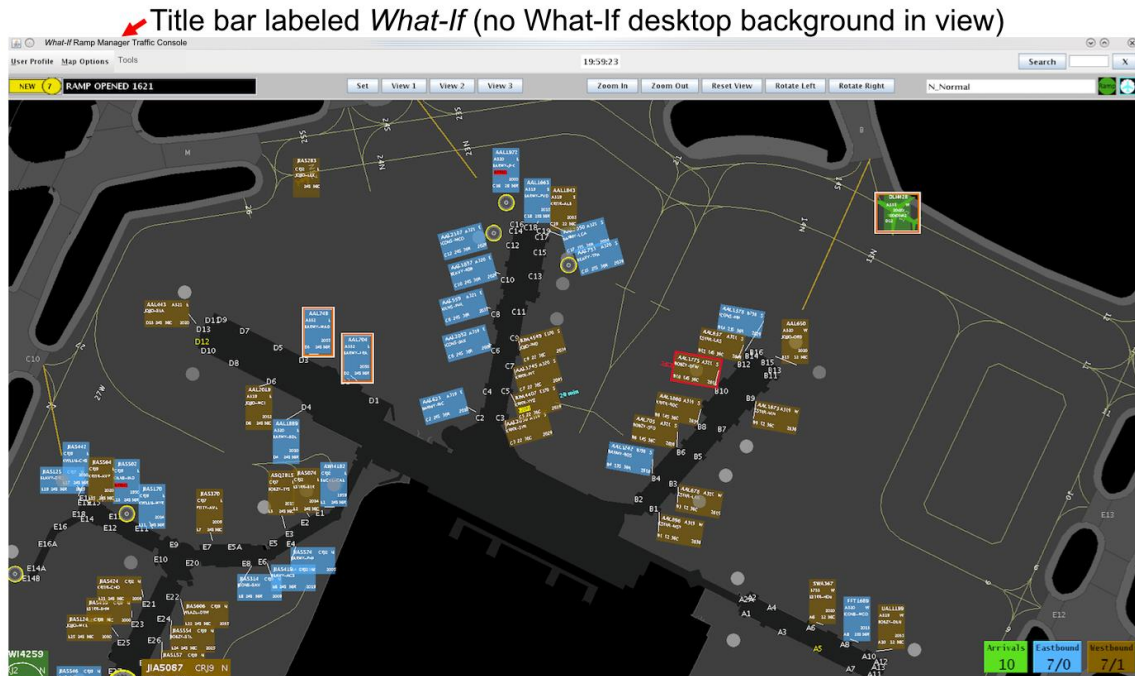
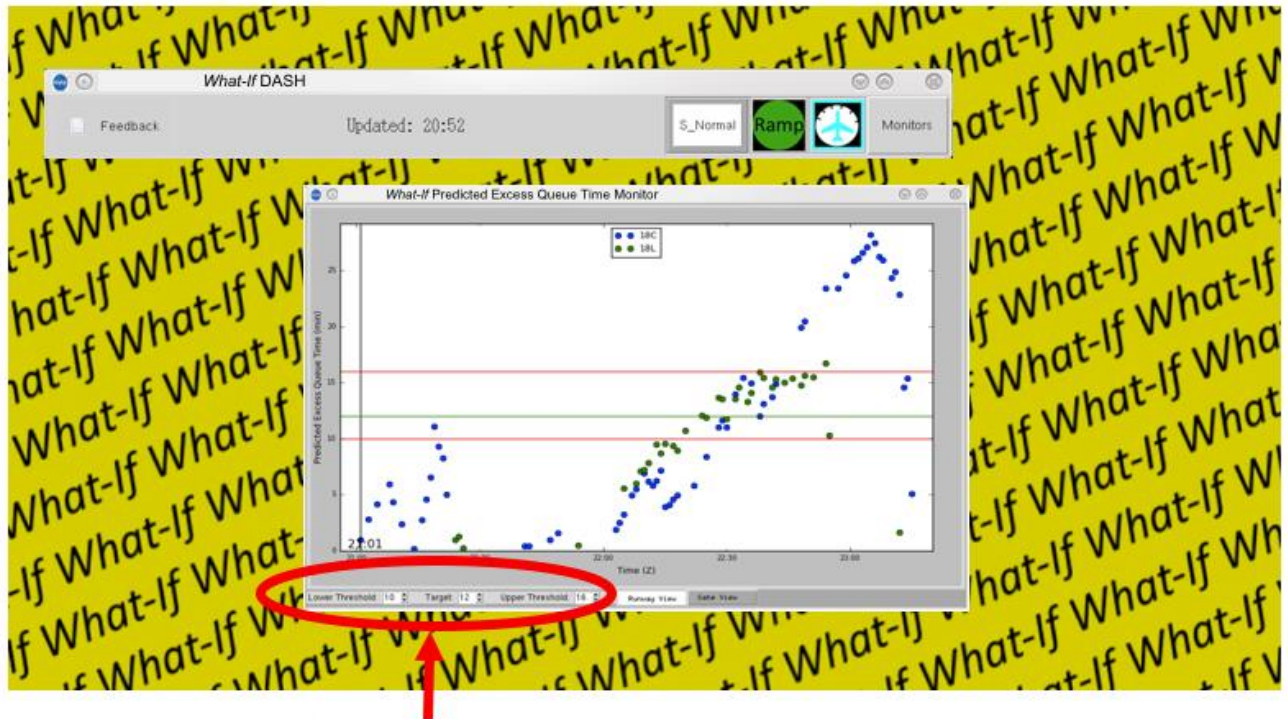


Figure 4-1 RMTC What-If System

## 5 What-If DASH

The What-if DASH (Figure 5-1) can be a useful tool for looking at metrics that change due to changes the users makes in the What-if system. In order to do so, open the DASH in the What-If System to be able to make changes in DASH and view the potential impacts on the system. The yellow What-If desktop will be visible under any DASH monitors when opened. What-If is also included on the DASH title bar as well as any DASH monitor title bars. Open the Predicted Excess Queue Time Graph (Figure 5-1) in the What-If DASH to view the impact of changes made to level of holds as well as upper and lower thresholds.



Enter proposed values for Lower Threshold, Target Queue Length, and Upper Threshold here

Figure 5-1 DASH What-If System