

OPDEC Network Trace Tool

Version 2024



Summary: The OPDEC Network Trace tool allows a user to easily identify all the activities leading up to one or more points in the schedule. This is used by planners to ensure that tasks are linked via logic (predecessor / successor) links to another milestone or task in the schedule. The user identifies an activity or milestone (or multiples) and the tool identifies all predecessors to that point or points. The tool also has a reporting feature which identifies the existence redundant links within the schedule.

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Minimum Requirements

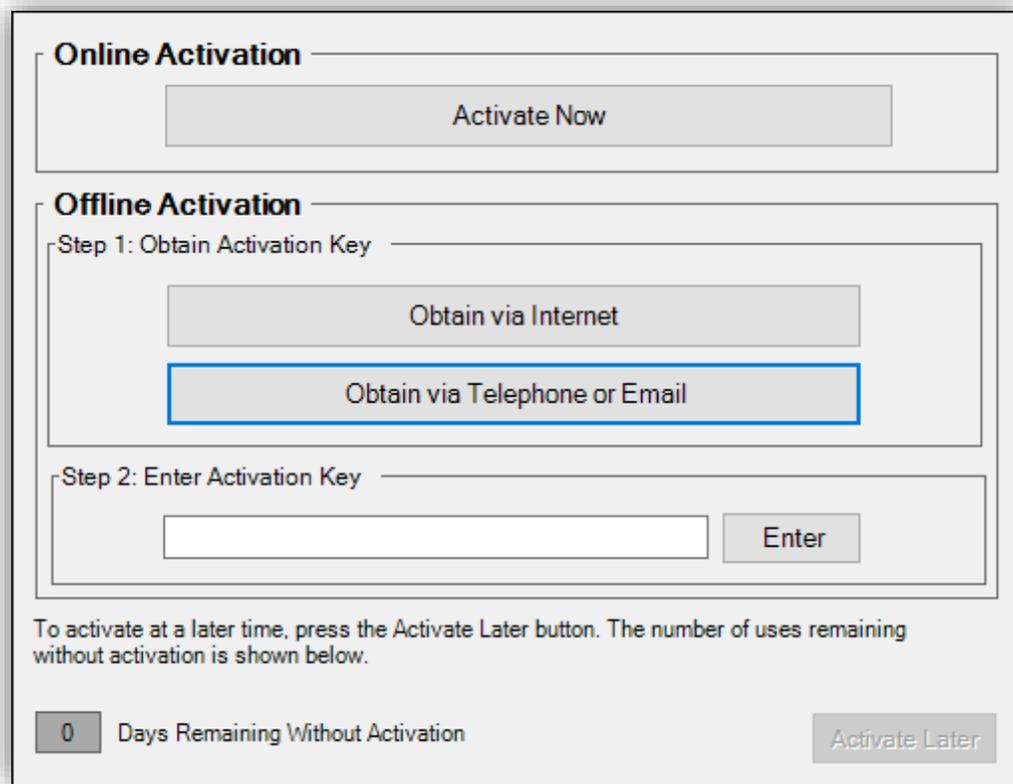
- Microsoft Project 2010
- Microsoft .NET Framework 4.8.1

Installation

- 1) Download the installation file from www.opdec.com/ms-project-tools/network-trace-tool
- 2) Extract the executable from within the ZIP folder.
 - a. You can do this by double-clicking the ZIP folder to open it, and then drag-and-drop the file within to your Desktop.
- 3) Double-click the executable file to launch the onscreen installation wizard. Note that you will need administrator privileges on the device to continue.
- 4) Follow the onscreen prompts and accept the EULA to complete the install.

Activation

- 1) Open Microsoft Project
- 2) Navigate to the OPDEC ribbon tab and click the Network Trace 2024 button.
- 3) Upon first launch, you will be presented with the activation window. The activation process can be delayed for up to 30 days using the **Activate Later** button.



Online Activation

Activate Now

Offline Activation

Step 1: Obtain Activation Key

Obtain via Internet

Obtain via Telephone or Email

Step 2: Enter Activation Key

Enter

To activate at a later time, press the Activate Later button. The number of uses remaining without activation is shown below.

0 Days Remaining Without Activation

Activate Later

- 4) If you have an internet connection on your device, click **Activate Now**.
 - a. Fill in your name, email, company, and assigned serial number provided upon purchase of the software. This is an 8-digit, alphanumeric code separated by a dash (e.g. a1b2-c3d4).

- b. Click **OK** and your activation will be complete. Note that security settings can prevent the online activation from succeeding. Please see step #5 if so.

Please fill in the form below and click OK.

Registration Information

Name:

Email Address:

Company Name:

Serial Number:

Unique Identifier: **291D6E6A3C9B283DC023D159570C**

- 5) If you do not have an internet connection, click **Obtain via Telephone or Email in Step 2: Offline Activation.**
- a. A popup will appear displaying your device's unique identifier.

Unique ID (provide this to OPDEC):

291D-6E6A-3C9B-283D-C023-D159-570D-F428-3C3E-D403

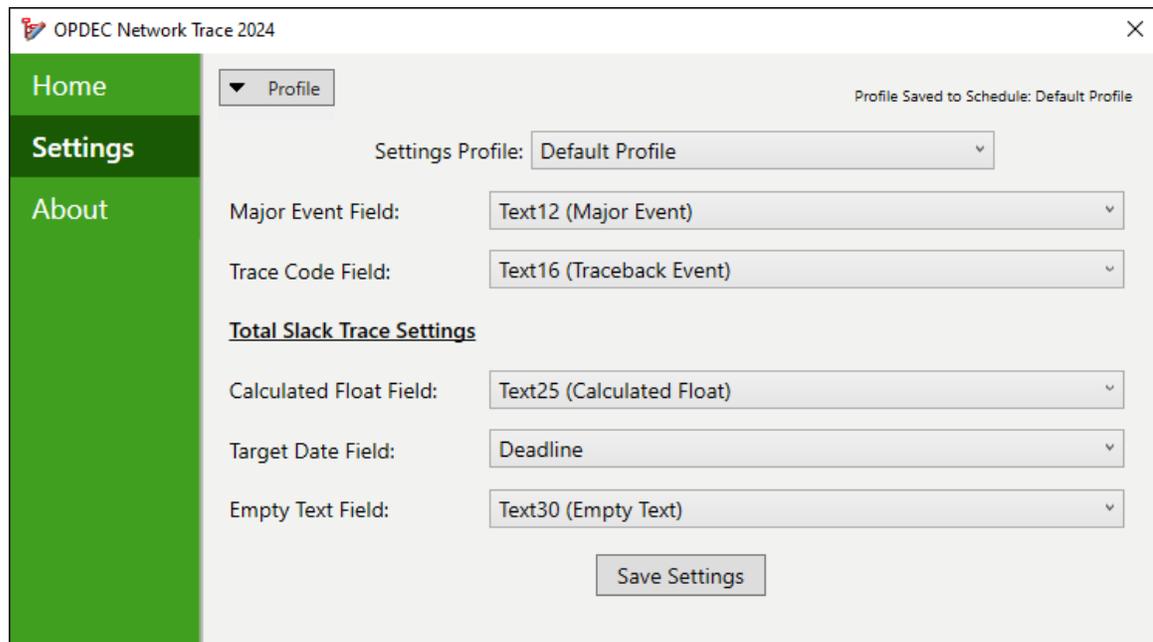
Call OPDEC: 1-256-881-1038

Email OPDEC:

- b. You will need to provide this to OPDEC Support along with your serial number to receive an activation key. You can email us at support@opdec.com using the **Send Email** button or call us at (256) 881-1038.

Create a Settings Profile

To start using the Network Trace tool, you need to establish a **Settings Profile** first. Click the **Settings** tab to get started.



Begin with either the Default Profile or click Profile -> Create New Profile. This Settings Profile identifies key information within your schedule the tool needs to perform its calculations. You can either use the same fields across all your schedules or create multiple profiles corresponding to each schedule.

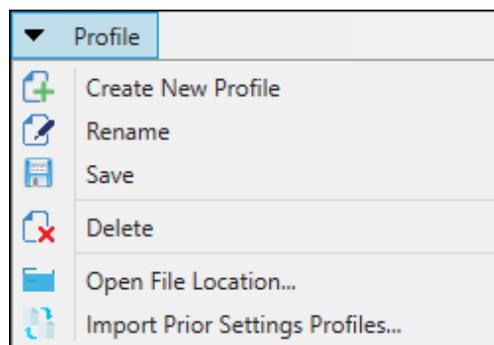
Settings Profile names are saved to the Microsoft Project file as a custom document property. This allows each file to associate itself with one of your Settings Profiles. You can see the name of the Settings Profile that is currently associated with the schedule in the top-right corner of the Settings tab. If a profile name is saved to the file but you do not have that matching Settings Profile, you will see a warning appear when the tool launches. You can either create a new Settings Profile with the requested name or switch to a different Settings Profile. The custom document properties are saved along with the schedule file, so closing a file without saving will prevent this tag from being retained.

- Major Event Field - Select the field where you are identifying the major events. The major events are typically 0-day duration milestones marking a significant progress point in your schedule. Major Event tasks are identified by inserting a value into this field.

- Trace Code Field – Select an empty Text field in your schedule. The tool uses this field to enter the trace code requested during the trace routines. You will use this field to filter your schedule down to a particular network.
- Calculated Float Field – This field is used to store the float for use in identifying the event that impacts the activity the most. This is utilized when using the **Total Slack Trace** option on the **Home** tab. This should be an empty text field in your project file.
- Target Date Field – This is the field specifying the date in which the event must complete by.
- Empty Text Field – Select any text field (other than those already defined in previous settings) that is not currently utilized in the schedule. This field is used to store information by the tool to complete the Total Slack trace process.

Manage Multiple Settings Profiles

At the top-left of the settings tab, the **Profile** dropdown menu provides you with options to manage multiple Settings Profiles. Here, you can **Create**, **Save**, **Rename**, or **Delete** the currently selected profile.

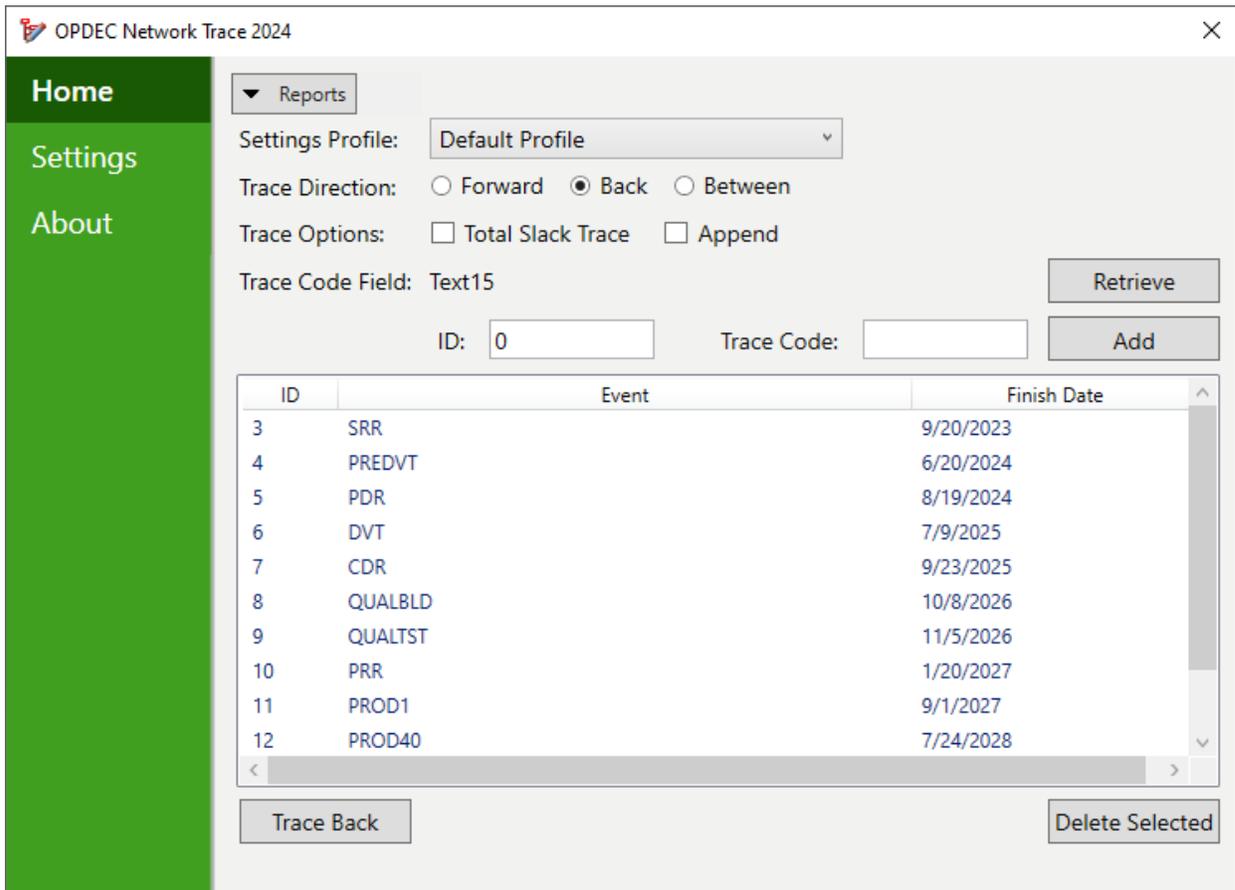


You can also convert your old settings profiles from the previous Network Trace 2020 version. To do so, click **Import Prior Settings Profiles....** Confirm you want to continue, and then validate the converted profiles to ensure they are accurate.

Additionally, whether you want to access the Settings Profiles you just converted or simply share your profile with another user, you can click the **Open File Location...** button. This opens the folder where these **Settings Profile** files are stored. If you want to transfer your settings to another user, you can have them use this same button on their device, and then copy/paste your files into their profile location.

Running the Network Trace

The tool conducts three different types of traces: **Forward**, **Back**, and **Between**. You can use the **Trace Direction** setting on the **Home** tab to toggle between these different modes. **Trace Back** is the most common trace direction. It recursively traces back through all predecessors of the task until it reaches each origin point. **Trace Forward** is like **Trace Back**, but starts at a given task and follows its successor logic forward until reaching each end point. **Trace Between** requires that you identify the start and end point, and all tasks linking those will be tagged as part of the same network.



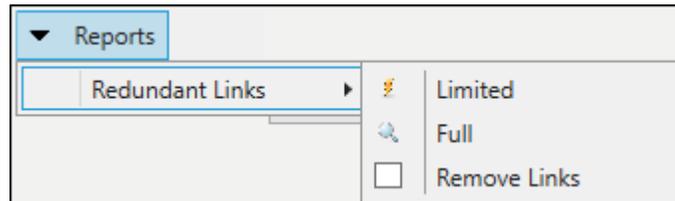
ID	Event	Finish Date
3	SRR	9/20/2023
4	PREDVT	6/20/2024
5	PDR	8/19/2024
6	DVT	7/9/2025
7	CDR	9/23/2025
8	QUALBLD	10/8/2026
9	QUALTST	11/5/2026
10	PRR	1/20/2027
11	PROD1	9/1/2027
12	PROD40	7/24/2028

- Settings Profile – Select the Settings Profile that corresponds to your active schedule.
- Trace Direction – Select the direction to trace. See the paragraph above for more detail. Also, examine the examples provided in the **Trace Back Example**, **Trace Forward Example**, and **Trace Between Example** later in this document.

- Trace Options:
 - Total Slack Trace – Check this setting to direct the tool to trace the actual total slack between predecessors. When using this option, the **Total Slack Trace Settings** are utilized. The **Calculated Float Field** you identified will be populated by the tool, showing the Total Slack for each task in the network relative to the Major Event’s **Target Date**. The **Target Date** for the Major Event is identified by the value in your **Target Date Field**.
 - Append – Selecting this option allows tasks to be tagged in multiple networks. Without this option enabled, tasks are tagged with the first (in date order) associated event. This option cannot be combined with the **Total Slack Trace** since the Total Slack calculation needs to be based on the nearest (by date) Major Event.
- Trace Code Field / Retrieve – The **Trace Code Field** here just displays the field you identified in your settings to store the network tagging in as a reminder. The **Retrieve** button will retrieve all the identified Major Events in your schedule and load them into the grid below. You will select these grid rows to choose which Major Event to trace back/forward from.
- ID/Trace Code/Add – These three controls allow you to manually enter tasks that you want to trace but have not identified as a Major Event. The **ID** corresponds to the Task ID in your schedule, the **Trace Code** is the value you want to use to tag associated network tasks with, and the **Add** button enters this information into the Major Event Grid.
- Major Event Grid – This grid displays all the Major Event tasks retrieved from your schedule and/or any manually entered events you input using the **ID**, **Trace Code**, and **Add** button.
- Trace Back/Forward – The text of this button changes depending on the **Trace Direction** you select. First, use the **Major Event Grid** to select a task to trace. Next, click this button to execute the trace.

Redundant Link Report

To access the Redundant Link Report, click the **Reports** dropdown at the top-left of the **Home** tab.

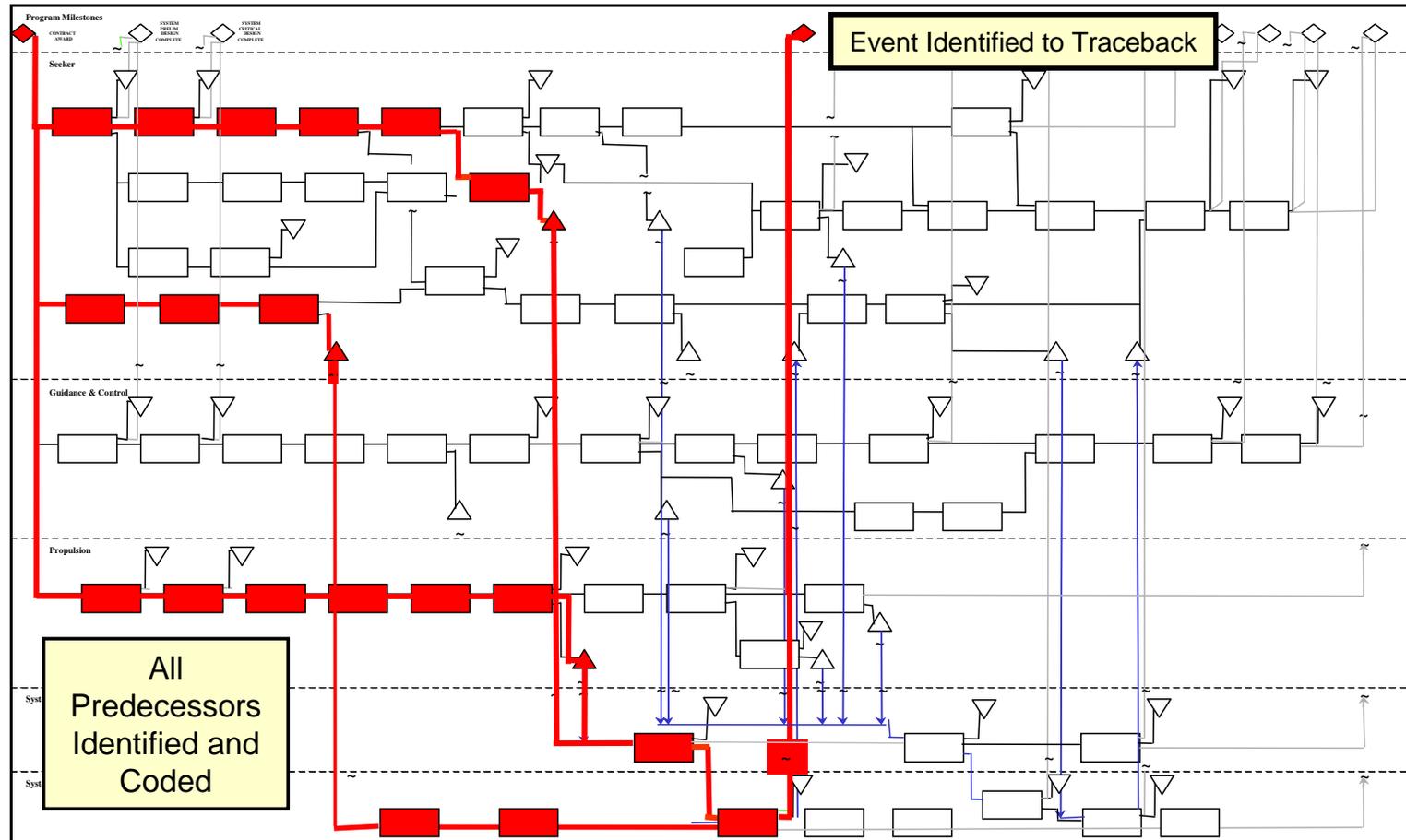


- Redundant Link Report – Redundant links are identified when one activity is directly and indirectly to another (see the **Redundant Links Report Example** for an illustration). This process generates a report in Excel detailing the redundant links identified in the schedule.
- There are 2 identification modes in evaluating a schedule for redundant links:
 1. Limited – In this mode, a sampling of the schedule is performed in attempt to identify a maximum of 100 redundant activities.
 2. Full – In this mode, the entire schedule is evaluated and a full report of all redundant links is provided. This mode will take longer to process.
- Remove Links – Checking this option will remove any identified redundant link if doing so does not change the dates of either activity.

Trace Back Example

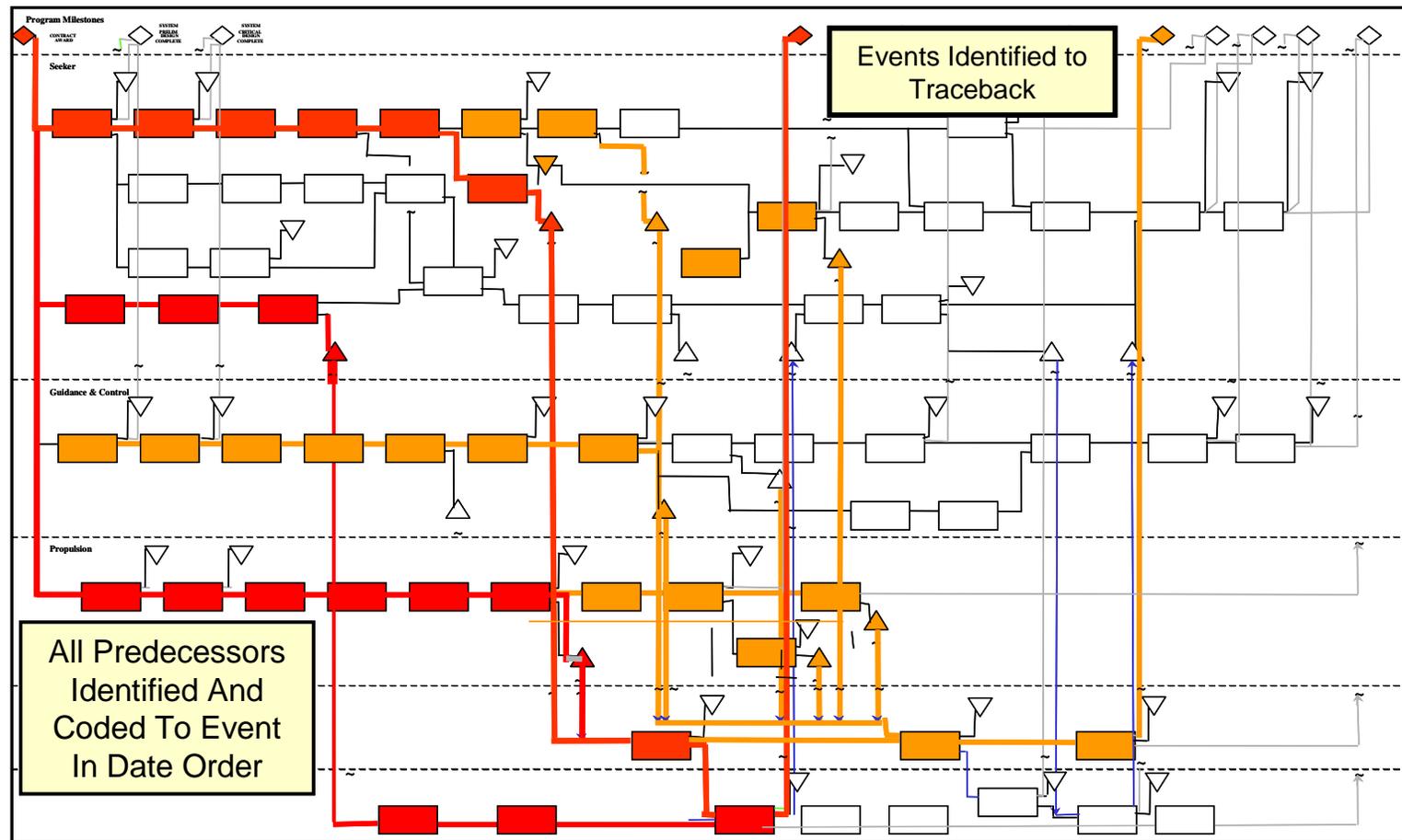
Single Event

- Trace back identifying all predecessors from a single event.



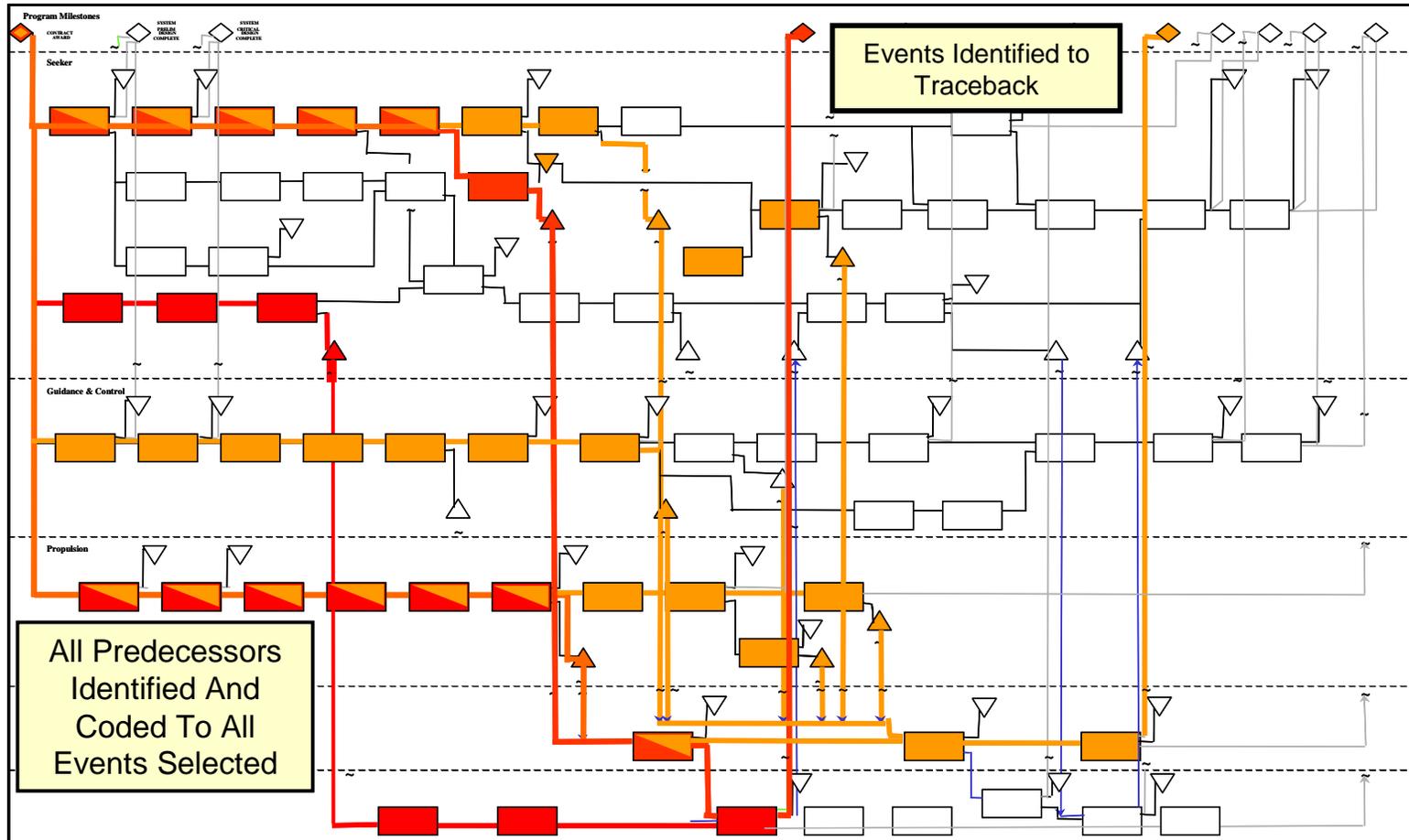
Multiple Events, First Reference

- Trace back identifying all predecessors from a multiple events.
- Process codes each predecessor with the first (in date order) event supported.
- Able to review tasks not coded to determine correct link to support an event and that all tasks support event milestones.



Multiple Events, All References

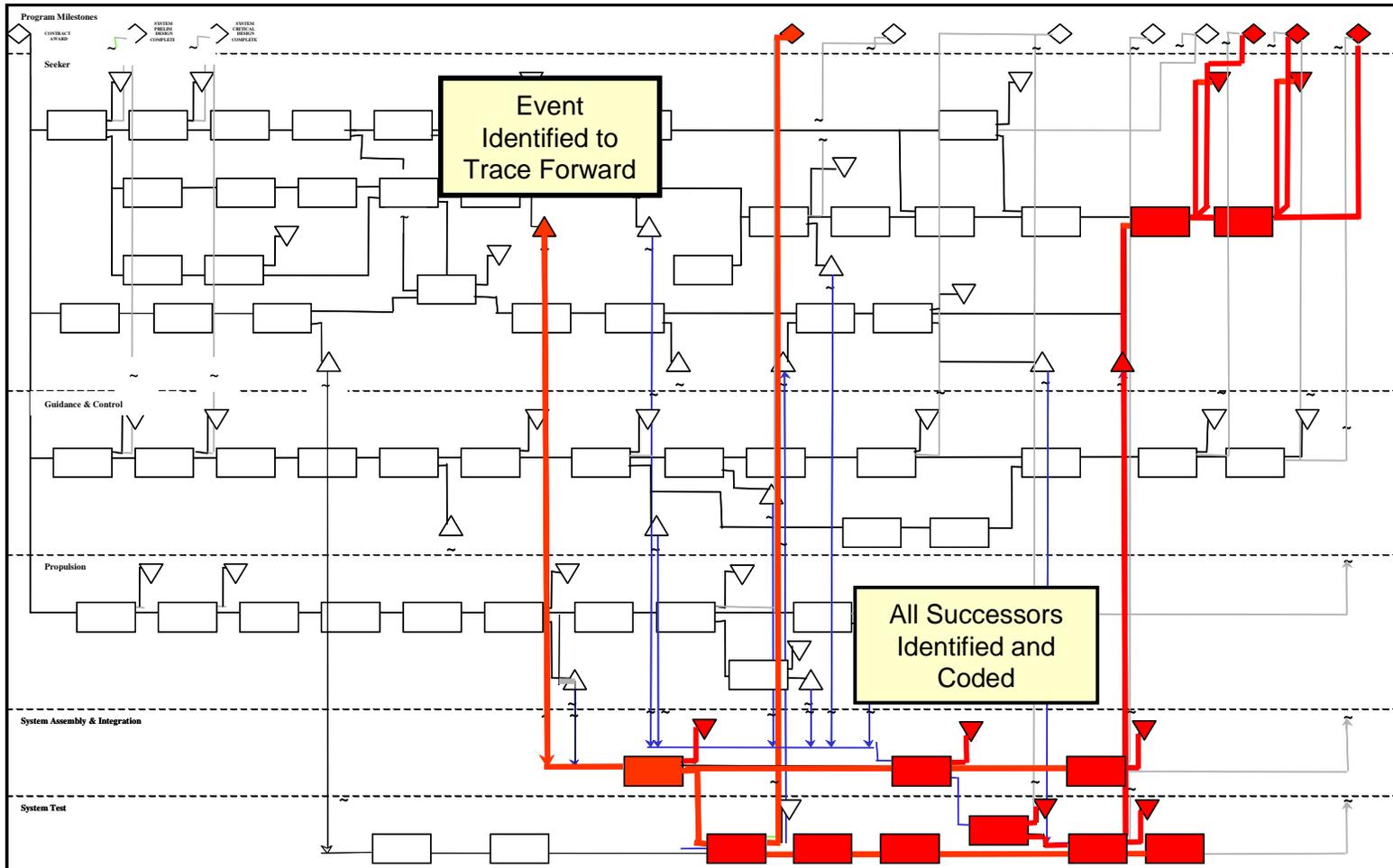
- Trace back identifying all predecessors from multiple events.
- Process codes each predecessor with all events supported.
- Able to review tasks not coded to determine correct link to support an event.



Trace Forward Example

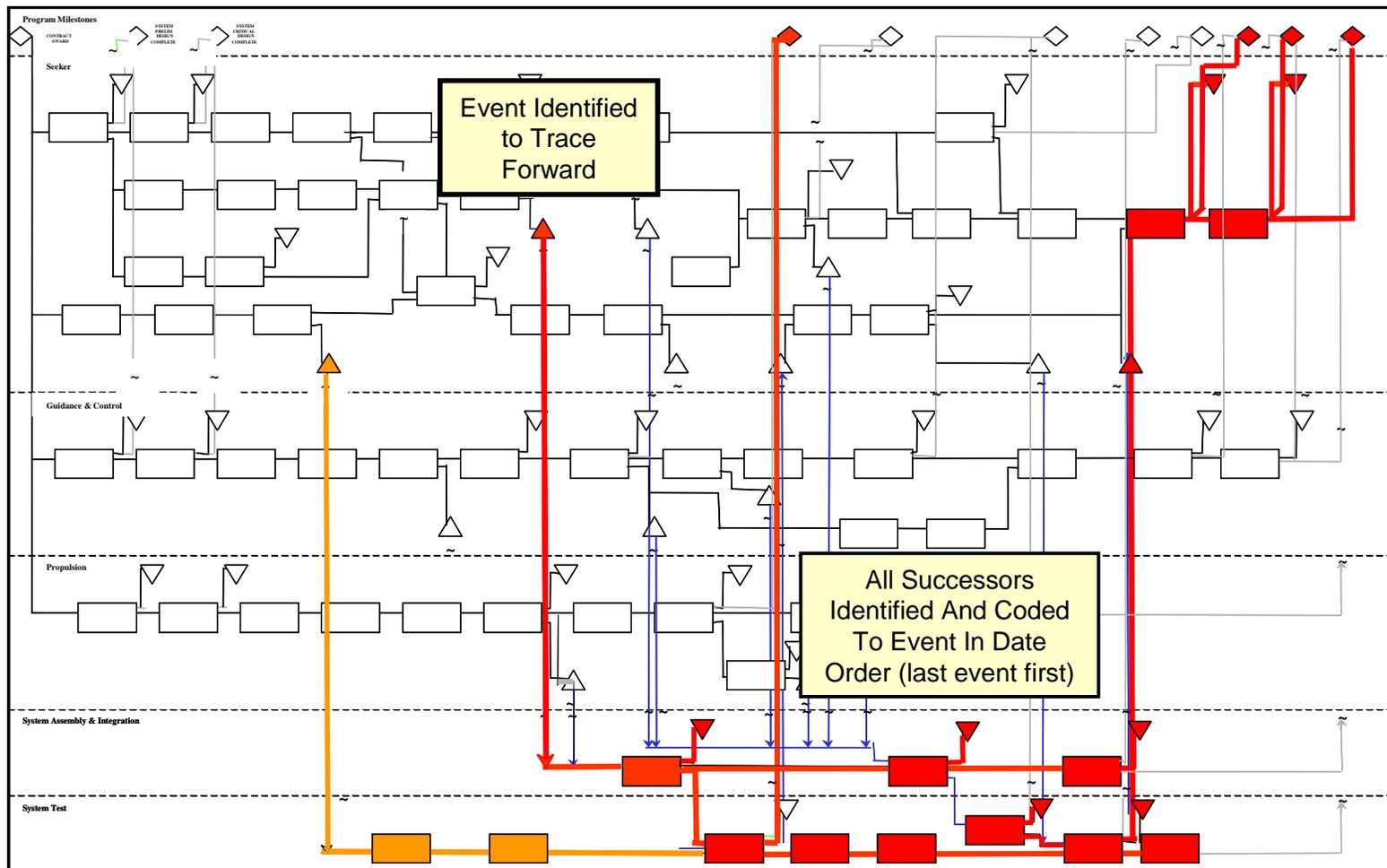
Single Event

- Trace forward identifying all successors from a single event.



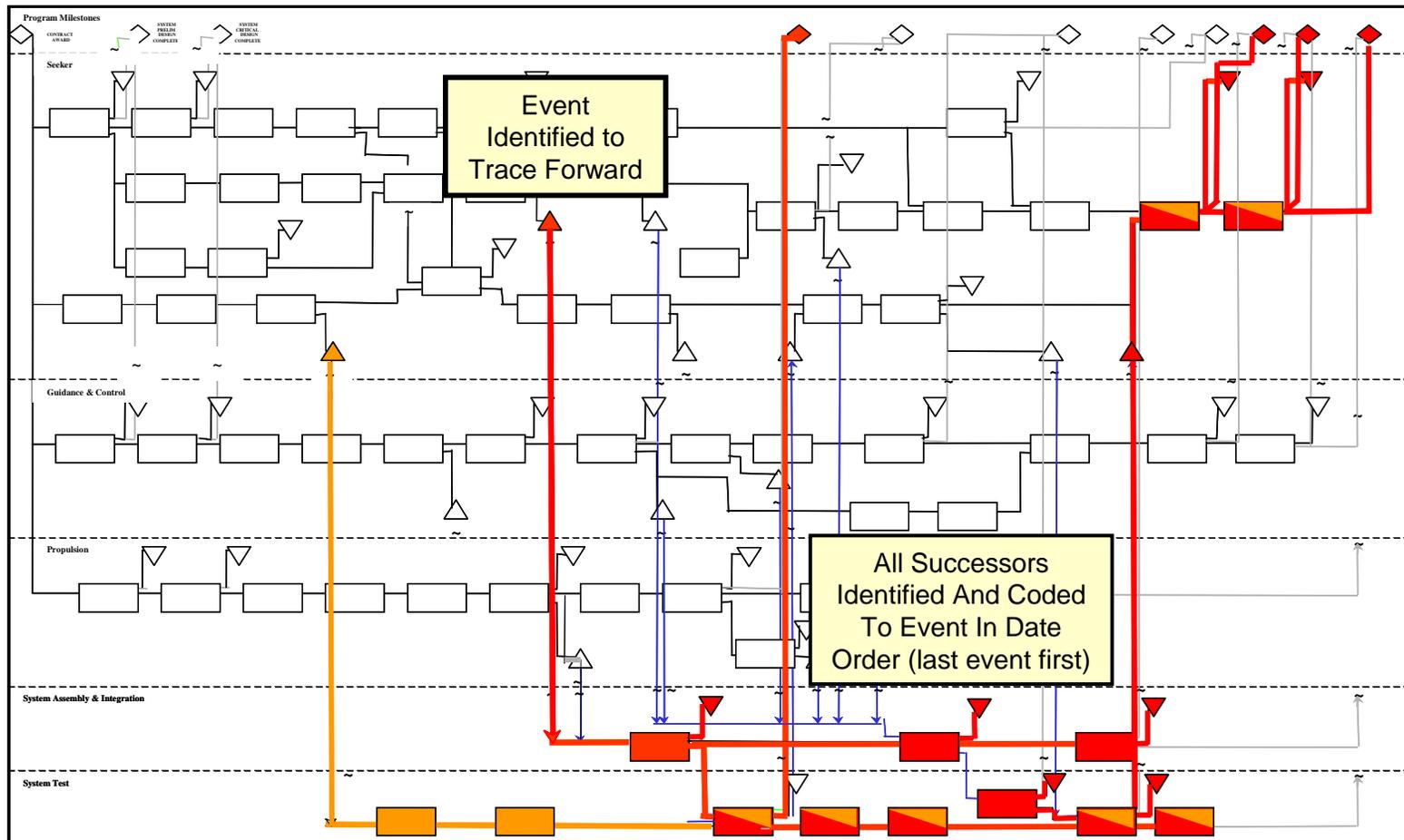
Multiple Events, Last Reference

- Trace forward identifying all successors from multiple events.
- Process codes each successor with the first (in date order) event supported.
- Able to review tasks not coded to determine correct link to support an event.



Multiple Events, All References

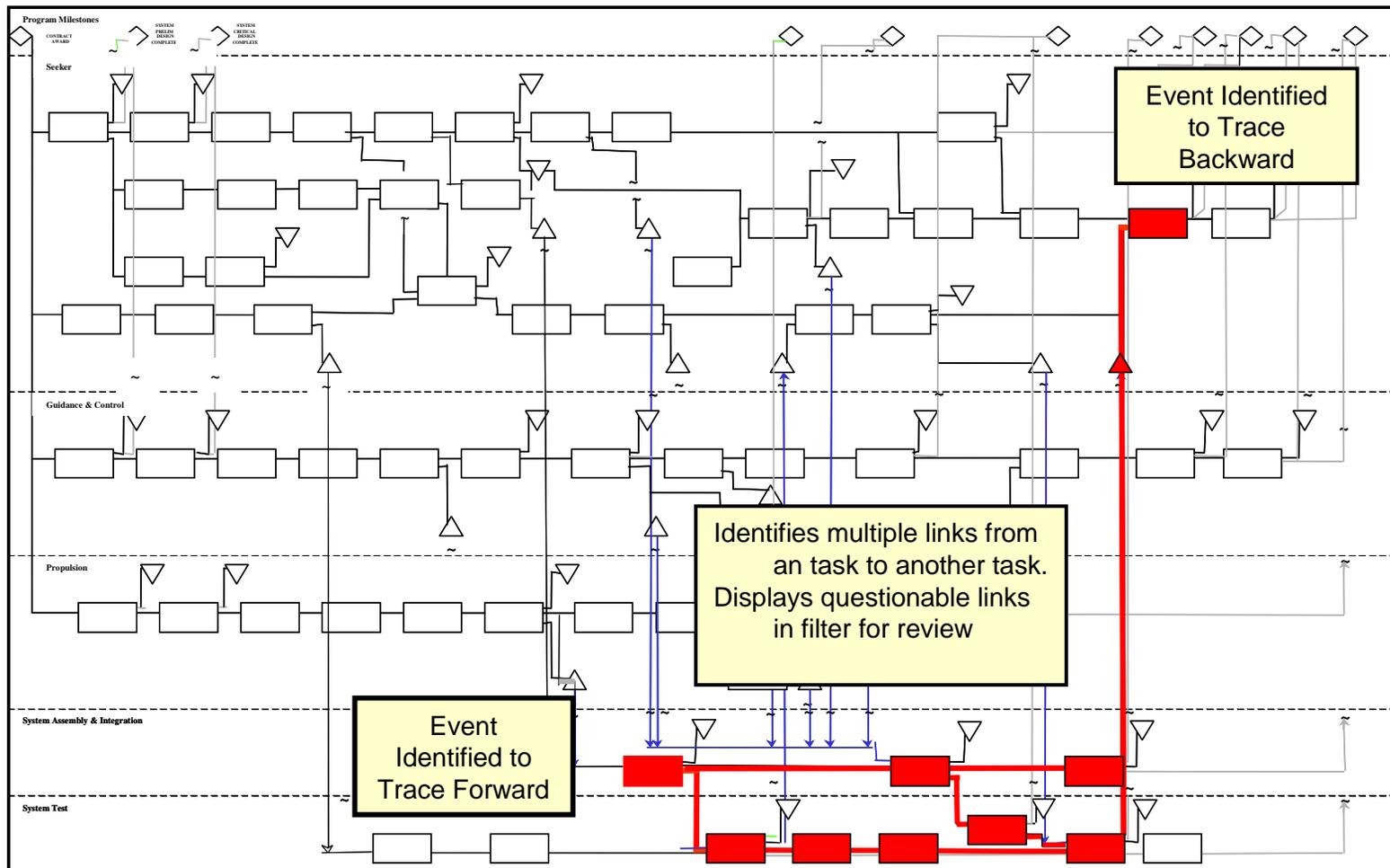
- Trace forward identifying all successors from a multiple events
- Process codes each successor with the all events supported (comma delimited)



- Able to review tasks not coded to determine correct link to support an event

Trace Between Example

- Trace between to events, identifying all activities linked.



- Codes all the tasks and then invokes a filter to select those tasks

Redundant Links Report Example

- Identifies multiple links from a task to its immediate successor task(s).
- The reason for this is to eliminate confusing logic.
- The report identifies the task and the successor that has multiple links.

