

RISA Webinar Q&A

Time History in RISA December 16, 2015

- **Q:** When would you use a load versus a mass?
- A: Loads tend to be easier than Mass because the program is doing the conversion for you.
- **Q**: Watching the webinar on Time History Analysis, does everything always remain linear elastic? Is there a way to allow members to yield?
- A: Our solver is currently a linear-elastic solver, so plastic hinges do not form. Therefore the blast loading example can be used to either verify that the blast kept everything in the elastic range, or to know that a more rigorous analysis is required.
- **0**: In the seismic example...is the time history function only applied to supports?
- A: It is being applied to all joints in this example.
- **0**: Is the El Centro time history ground shaking or something else?
- A: The El Centro function was taken from the PEER database as shown.
- **0**: Is the time history function only a part of RISA-3D? Is there any Time History functionality included in RISAFloor?
- A: Time History is only available in RISA-3D, however it can be applied to RISAFloor Lateral Members when you use the Director in RISAFloor to go into RISA-3D for lateral analysis. Even if a member isn't truly "lateral" you can call it lateral to get it in RISA-3D.
- **0**: Why would you apply a seismic time history acceleration to all joints rather than just the support nodes.
- A: This example was modeled similar to The Seismic Design Handbook 2nd edition section 4.6.4. in which they apply the seismic time history to ALL joints.
- **0**: Will RISA-3D to RISAFoundation transition function the same as a ELF analysis? Will the seismic loads in Foundation be time-stepped loads or enveloped?
- A: Time History loads are not currently imported into RISAFoundation. Only static loads are transferred.
- **0**: If the .TH file is edited, is it automatically changed in the time histories or does the time history need to be re-imported?
- A: The file is read when you open the program, so if you make changes to the file you must close RISA-3D and re-open it
- **0**: The "help" file says P-delta is not supported and t-only and c-only elements can't be used. Can T-spring and C-spring supports be used?

- A: No, only both-ways springs may be used with Time History
- **0**: Do yo have an example of checking floor beam vibration with a velocity and acceleration limit with Time History?
- A: There is no way to impose a limit in the program, so we do not have such an example.
- **0**: What verification or benchmark studies have been done to ensure that the TH feature is working properly?
- A: We have published verification problems which we created to benchmark the features.
- **0**: What are the non-linear capabilities of RISA?
- A: P-Delta analysis and tension-only/compression-only are the only non-linear capabilities of the RISA-3D solver.