

Initial conditions for free vibration

How are initial free-vibration conditions applied to the beginning of a time-history analysis?

Extended Question: I am interested in subjecting a SAP2000 model to an initial displacement and velocity at the start of a time-history analysis. Is this possible and how would it be done?

Answer: The initial conditions of a time-history [load case](#) may either be zero, or may continue from the end of a previous [nonlinear](#) analysis. Initial free-vibration conditions would have to be induced in the previous case before that state carries over into the [time-history](#) analysis.