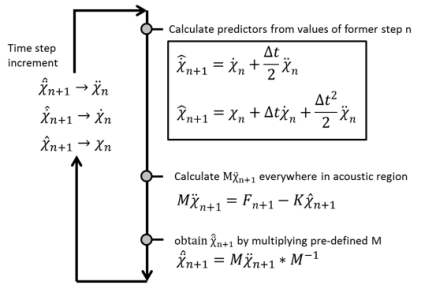
Time step increment
$\hat{\ddot{\chi}}_{n+1} \rightarrow \ddot{\chi}_n$
$\hat{\dot{\chi}}_{n+1} \rightarrow \dot{\chi}_n$
$\hat{\chi}_{n+1} \rightarrow \chi_n$
Calculate predictors from values of former step n
$\hat{\dot{\chi}}_{n+1} = \dot{\chi}_n + \frac{\Delta t}{2}\ddot{\chi}_n$
$\hat{\chi}_{n+1} = \chi_n + \Delta t\dot{\chi}_n + \frac{\Delta t^2}{2}\ddot{\chi}_n$
Calculate $M\ddot{\chi}_{n+1}$ everywhere in acoustic region
$M\ddot{\chi}_{n+1} = F_{n+1} - K\hat{\chi}_{n+1}$
obtain $\ddot{\chi}_{n+1}$ by multiplying pre-defined M
$\ddot{\chi}_{n+1} = M\ddot{\chi}_{n+1} * M^{-1}$