

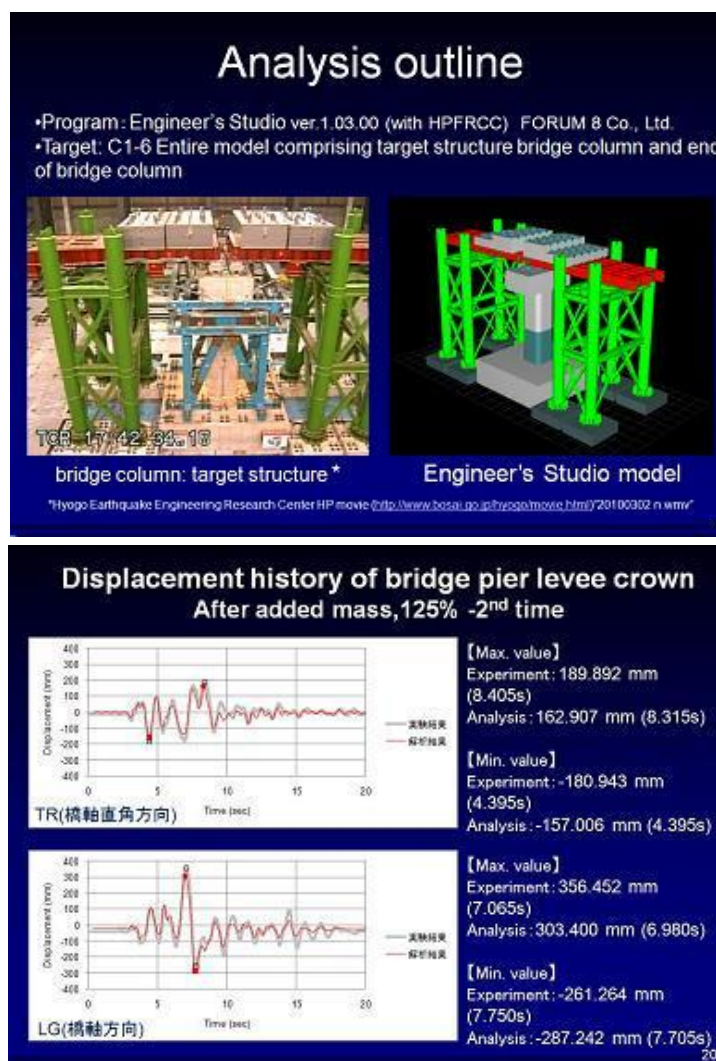
# FORUM 8

## Press Information

FORUM8 has won the 3D blind analysis contest by using "Engineer's Studio®"

On July 8, 2010, a combined team formed by Forum8 employee and the president of A-Works, Hiroki Aoto, Tokyo city university Professor, Hiromichi Yoshikawa were commended for "Destruction analysis blind analysis contest result the commendation of the bridge column earthquake proofing experiment used nature mortar". The team's bridge earthquake proofing experiment results of research announcement meeting (sponsorship (Germany) Natl. Res. Inst. for Earth Sci. and Disaster Prevention) in 2010 emerged as winners and were named champions.

The analyzed object's column support was predicted as an amount of model earthquake proofing RC supporting column used nature mortar (HPFRCC) which does not grow on for a pillar basal part in the next generation. We analyzed it with Engineer 's Studio and were able to predict experimental results with high precision.



### ■Outline of "Engineer's Studio®"

Engineer's Studio®, 3D FEM analysis program is in house development from pre-processing and calculation engine to post-processing.

This program analysis non-linear behavior of structure by modeling with beam elements considering a part of civil engineering and building structure as one bar or continuous plate elements.

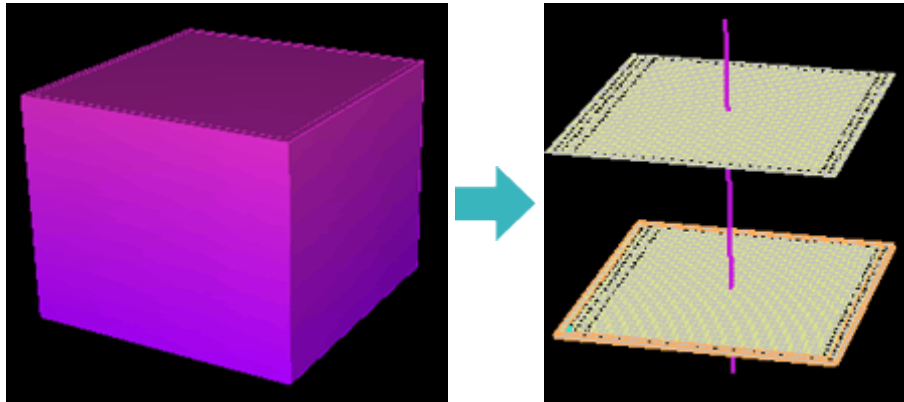
### Program Features

Main feature in analysis is that implement the 3D filer elements, which have ever received a good reputation and

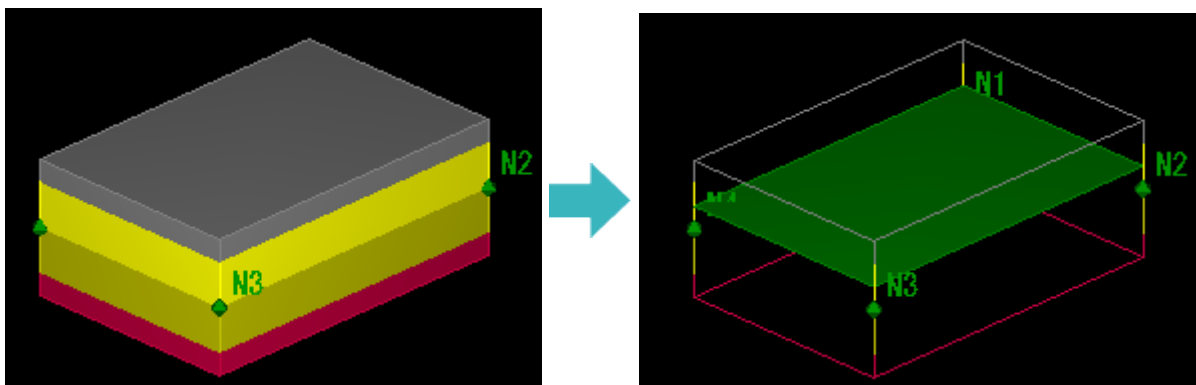
many actual results in UC-win/FRAME(3D) and the plate elements based on the Reissner-Mindlin theory and also static / dynamic analysis are available, considering material nonlinearity and geometric nonlinearity(Large Displacement) simultaneously.

Plate elements can have laminated structures, consists of layers which direct to the thickness way and define each setting for different type of materials between each layers or linear/non/linearity.

Reinforcement concrete non linear constitutive equation is adopted as concrete constitutive equation applied to the plate elements, which was developed by the concrete laboratory in Tokyo University.



▲Image of Fiber elements (the mathematical model on the right)



▲ Image of laminated plate elements (the mathematical model on the right)

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