PLPAK NEWSLETTER
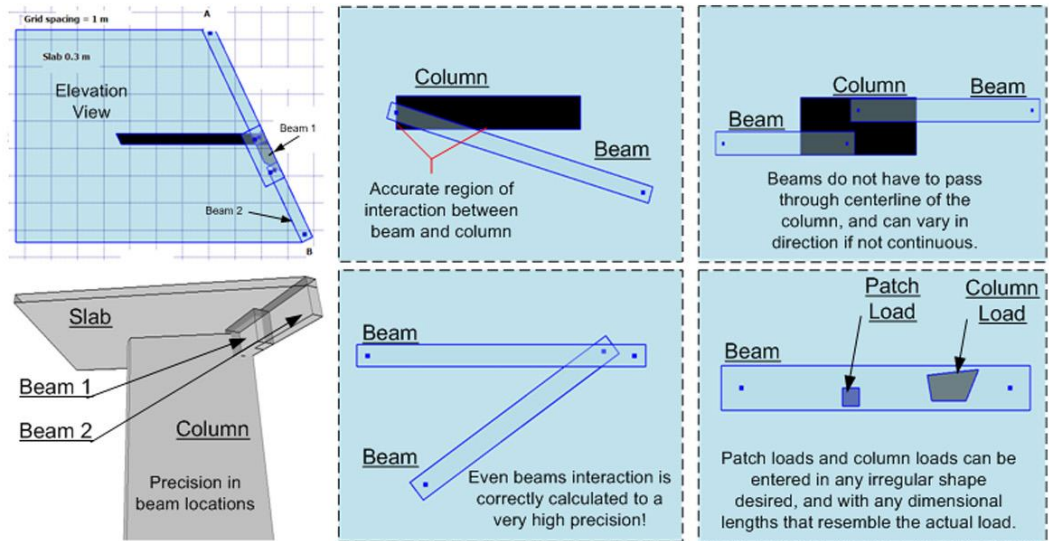## Your host to the latest progress and updates

Distinction of PLPAK Geometrical Modeling
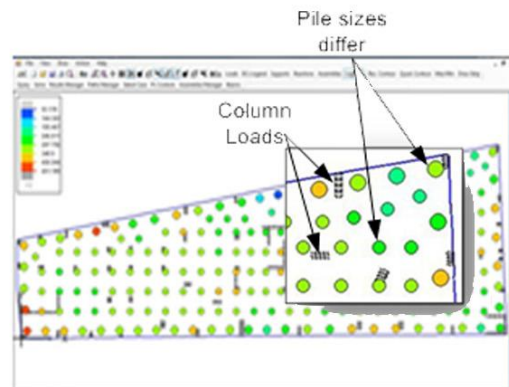## The frontier in geometircal accuracy

Proper modeling of continuums is required to evaluate the stresses produced, especially if there are uncertainties around the software results and an "as-built" model is required. Accurate and rapid geometrical modeling of concrete members is possible with the PLPAK, contrary to what finite element software forces users to do, hence detailing is more rapid when using design software like the PLDesign. The PLPAK cares for the tiniest details introduced to the system, whether they were complex structural supporting members, irregular patch loads, or even small openings (this is due to the benefits of choosing the boundary element method). Demonstrated is some of the crucial advantages of accurate geometry modeling available only through the PLPAK.

1) Structural elements conected precisly as required   Below are views from the PLGen
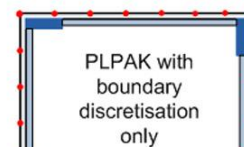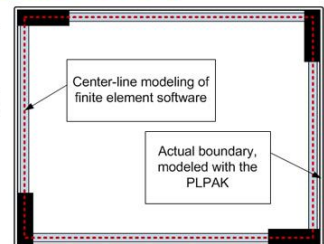

Grid spacing = 1 m
Slab 0.3 m
Elevation View
Beam 1
Beam 2

Column
Beam
Accurate region of interaction between beam and column

Column   Beam
Beam   Beam
Beams do not have to pass through centerline of the column, and can vary in direction if not continuous.

Slab
Beam 1
Beam 2
Column
Precision in beam locations

Beam
Beam
Even beams interaction is correctly calculated to a very high precision!

Patch Load   Column Load
Beam
Patch loads and column loads can be entered in any irregular shape desired, and with any dimensional lengths that resemble the actual load.

2) Piles with actual dimensions

Piles are placed easily at any location with different diameters.
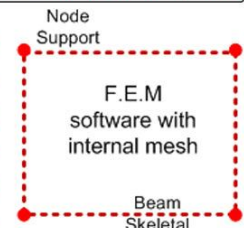

Pile sizes differ
Column Loads

3) No more center-line modeling

Easy and accurate reinforcement detailing and lengths.

Center-line modeling of finite element software
Actual boundary, modeled with the PLPAK

Node Support

PLPAK with boundary discretisation only

F.E.M software with internal mesh

Beam Skeletal

No centerline modeling, all element vertices at correct coordinates

---

SPECIAL OFFER

50% OFF!
Half off for all academics. Special offers for multiple choices of packages. Get your license now.

CONTACT:

Information about the PLPAK: info@be4e.com

Courses, seminars & consulting, webinars: services@be4e.com

Sales: sales@be4e.com

Research and developments: RnD@be4e.com

Customer support: support@be4e.com

DEVELOPMENT

The PLPAK software is in constant development to meet the needs of industrial and research purposes. Updates to the software will be posted monthly.

EDITORS
Ahmed A. Torky
Youssef F. Rashed
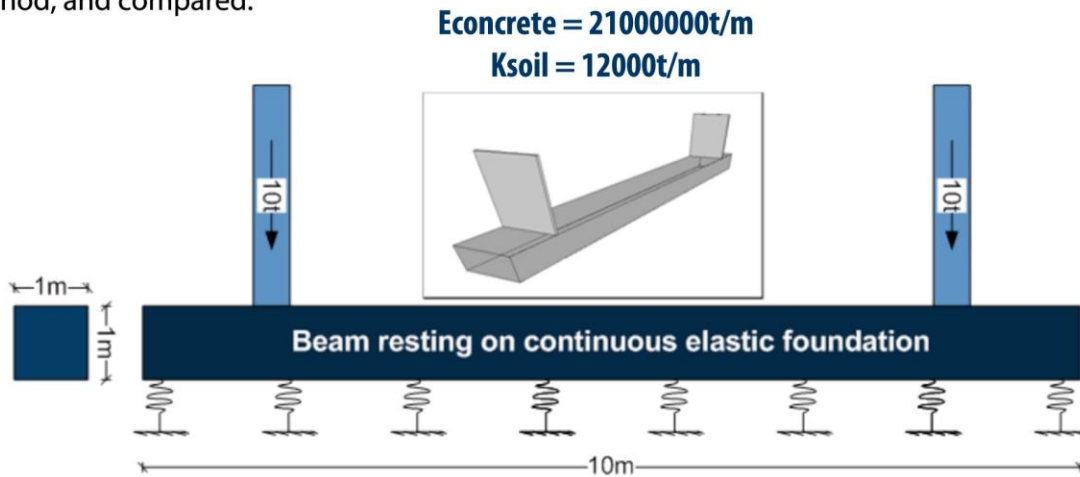

Connect with us!

You can now register on our website for more exclusive features related to boundary element analysis in structural engineering. Connect via this link: www.be4e.com , or you could use the following code on the right .
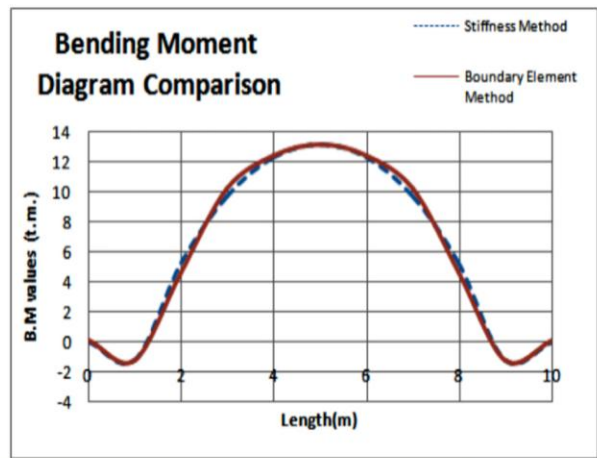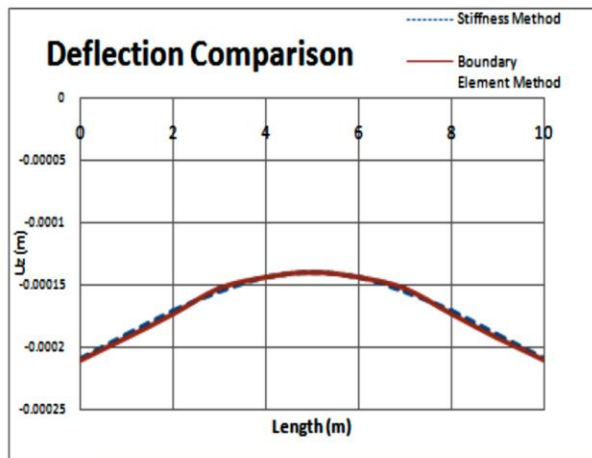
Benchmark
Accuracy of the Boundary Element Method:
Beam on Elastic Foundation

Available in the PLPAK is a means to model slab regions of any shape on continuos soil supports. A simple example is provided in which a beam on elastic half-space is modeled using the PLPAK and the computer stiffness method, and compared.

Econcrete = 21000000t/m
Ksoil = 12000t/m

10t   10t

←1m→
1m

Beam resting on continuous elastic foundation

←————————10m————————→

The stiffness method used included beam members divided into 1 meters each and processed using the computer stiffness method. Both the PLPAK model and the stiffnes model have the same beam modulus and soil spring stiffness shown in the above illustration. The PLPAK considered continous area soil springs. The results *similarity* between both methods of analysis is shown below through the calculation of straining actions:

Deflection Comparison
-------- Stiffness Method
—— Boundary Element Method

Uz (m)
Length (m)

Bending Moment Diagram Comparison
-------- Stiffness Method
—— Boundary Element Method

B.M values (t.m.)
Length(m)

In need of more questions answered?
We are always on the alert to answer your queries and support your smooth transition to a better boundary element sense in analysis. Send us any queries or comments to our new [Questions & Answers] page and await our reply in the coming issue! *http://www.be4e.com/site/node/56* The form which you can fill out is shown betow:

Boundary Elements for Engineers

The **PLPAK** - Boundary Element Analysis
REAL GEOMETRY MODELING OF ALL STRUCTURAL MEMBERS

Search
Log in | Register

Home » Questions & Answers

BE4E
Home
Products ►
Services
Demo Version
Purchase
Contact us
Customer Support
About us
Questions & Answers

Questions & Answers
Submit any question regarding BE4E Products and we will replay by email & via Newsletter.
Email: *
Occupation: *
Company: *
Question: *
Submit

Scan me for quicker acces!