

December 16, 2002
G9704-SSG-018

DOCUMENT CONTROL DESK
UNITED STATES NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

- Reference:
- a) Boeing Letter G-1151-RSO-92-365 dated August 31, 1992; R.S. Orr to the NRC Operations Center
 - b) NRC Letter Docket No. 99901227 dated August 12, 1992; L. J. Norrholm to R. S. Orr; Subject: Response to 10 CFR 21 Inquiry

Dear Sir or Madam:

In accordance with the Reference correspondence and 10 CFR 21, Boeing is sending the NRC the attached error notices received from our former software suppliers. Because of unknown current addresses, the following former customers were not notified:

Reactor Controls, Inc
Echo Energy Consultants
Nuclear Applications and Systems Analysis Company (Japan)
Nuclear Power Services
GPU Nuclear Corporation
Tenera, Inc.
Stone & Webster Engineering
Raytheon Engineers & Constructors

Also, Duke Engineering & Services was sold to Frametone. We are currently trying to determine the correct report recipient at DES Frametone.

Error notices have been sent to our other former customers.

Very truly yours,


Mark S. Snyder
Nuclear Administrator
Mail Code 7A-43

Enclosures: GT STRUDL Program Report Forms 2002.06 through 2002.09

LEDO



GTSTRU DL Program Report Form

GPRF No.: 2002.10

DATE: 11/18/2002

FROM: Computer-Aided Structural Engineering Center
Georgia Institute of Technology
Atlanta, Georgia 30332-0355

SEVERITY LEVEL:

- URGENT Problem results in incorrect answers which may not be apparent or job aborts and cannot be recovered within the session or job.
- SERIOUS Problem results in incorrect answers which are obvious or problem prevents completion of a particular user's task.
- MINOR Problem can be worked around or problem poses high frustration factor.
- INFORMATIVE Documentation error, program usage tip, user inconveniences.

Date Problem Confirmed November 18, 2002

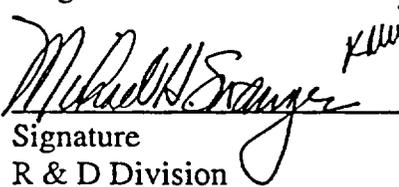
Date Notification Sent 11/18/02

Computers All

Operating System All

Version All

Target Release for Correction Version 27.0


Signature
R & D Division

Sr. RE
Title

Michael H. Swanger
Typed or Printed Name

11/18/2002
Date of Signature


Signature
Professional Services Division

Configuration Control Manager
Title

David C. Key
Typed or Printed Name

11/18/02
Date of Signature

GTSTRUDL Program Report Form
(Continued)

GPRF No.: 2002 10

DATE: 11/18/2002

DESCRIPTION:

Accelerations, velocities, and displacements are not computed (= 0.0) for slave degrees of freedom if a stiffness analysis is executed between an eigenvalue analysis and either a transient analysis or steady state analysis. The following sequence of analysis commands illustrates a procedure that causes this error:

DYNAMIC ANALYSIS EIGENVALUE
STIFFNESS ANALYSIS
PERFORM STEADY STATE ANALYSIS

As a further result of the incorrect displacements, member end forces and finite element reactions and stresses will be incorrect for any members and/or elements that are connected to slave degrees of freedom.

The work-around is to execute any required stiffness analyses either before beginning a sequence of dynamic analysis steps or following the completion of all dynamic analysis steps.

This problem will not occur in a model having no joint constraints.

GTSTRUDL User Reference Manual Sections:

Split Solver for Dynamic Analysis

Section 2.4.5.5, Volume 3, GTSTRUDL Reference Manual, Revision R.

Joint Constraints – Joint Ties and Rigid Bodies

Section 2.6.4, Volume 3, GTSTRUDL Reference Manual, Revision R.

GTSTRUDL Program Report Form

GPRF No. 2002 11

DATE: 11/20/2002

FROM: Computer-Aided Structural Engineering Center
Georgia Institute of Technology
Atlanta, Georgia 30332-0355

SEVERITY LEVEL:

- URGENT Problem results in incorrect answers which may not be apparent or job aborts and cannot be recovered within the session or job.
- SERIOUS Problem results in incorrect answers which are obvious or problem prevents completion of a particular user's task.
- MINOR Problem can be worked around or problem poses high frustration factor.
- INFORMATIVE Documentation error, program usage tip, user inconveniences.

Date Problem Confirmed November 20, 2002

Date Notification Sent 11/25/02

Computers All

Operating System All

Version All

Target Release for Correction Version 27.0

Michael H. Swanger
Signature
R & D Division

Sr. RE
Title

Michael H. Swanger
Typed or Printed Name

11/20/02
Date of Signature

David C. Key
Signature
Professional Services Division

Configuration Control Manager
Title

David C. Key
Typed or Printed Name

11/25/02
Date of Signature

GTSTRUDL Program Report Form
(Continued)

GPRF No. 2002 11

DATE: 11/20/2002

DESCRIPTION:

The NONLINEAR ANALYSIS command may abort if the structure has IPCABLE elements and the active load list contains at least two loading conditions when the NONLINEAR ANALYSIS command is given. Below is an example of the LOAD LIST and NONLINEAR ANALYSIS commands that may result in the abort for a structure that has IPCABLE elements:

```
LOAD LIST 10 11 21
NONLINEAR ANALYSIS
```

The workaround is to execute separate nonlinear analyses for each desired loading condition:

```
LOAD LIST 10
NONLINEAR ANALYSIS
LOAD LIST 11
NONLINEAR ANALYSIS
LOAD LIST 21
NONLINEAR ANALYSIS
```

GTSTRUDL User Reference Manual Sections:

Nonlinear Analysis of Cable Structures

Section 2.6.3, Volume 3, GTSTRUDL Reference Manual,
Revision R.