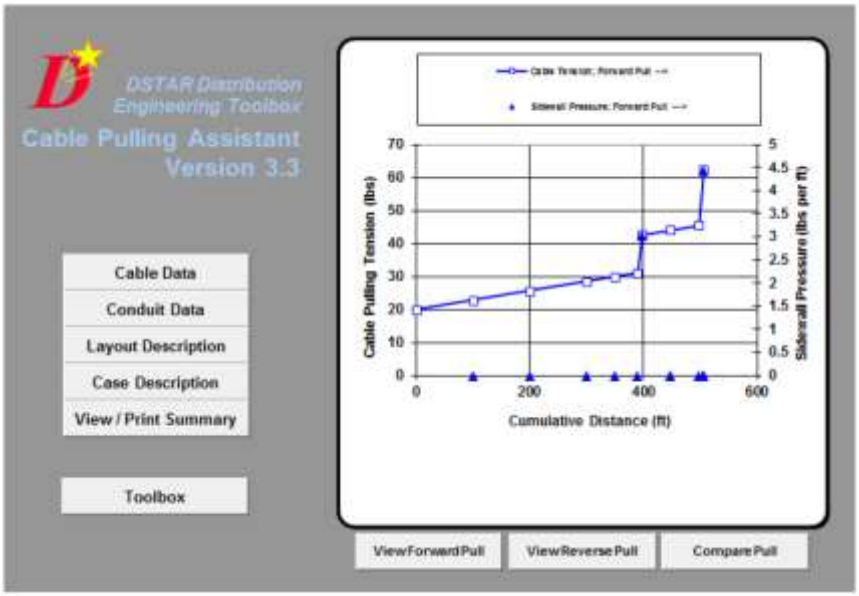
Project 14-5:
Cable Pulling Assistant (CPA) Updates

Final Report/Software prepared July 2014; available @ www.dstar.org

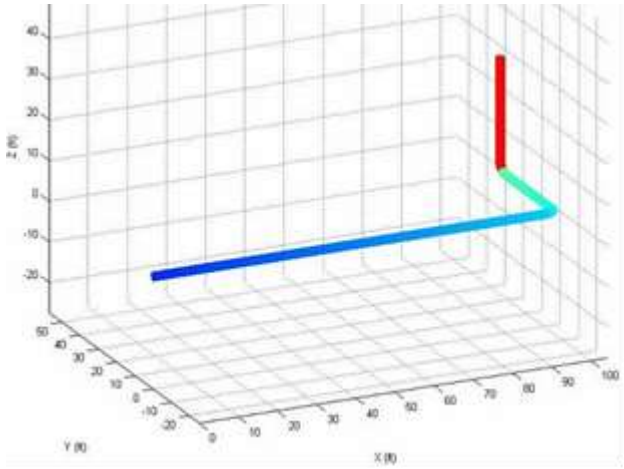
Project Summary:

The Cable Pulling Assistant (CPA) software is used to quickly calculate cable pulling tensions and sidewall pressures for a given layout. It allows easy comparison of pulls in either direction. CPA also calculates probability of cable jamb, conduit fill, and conduit clearances. A key feature of CPA is that the calculations for pulling in either direction can be quickly obtained, without re-entry of the conduit layout data. As with other DSTAR Engineering Toolbox programs, CPA can be customized to allow the user to directly select the cables and conduits used by a utility.



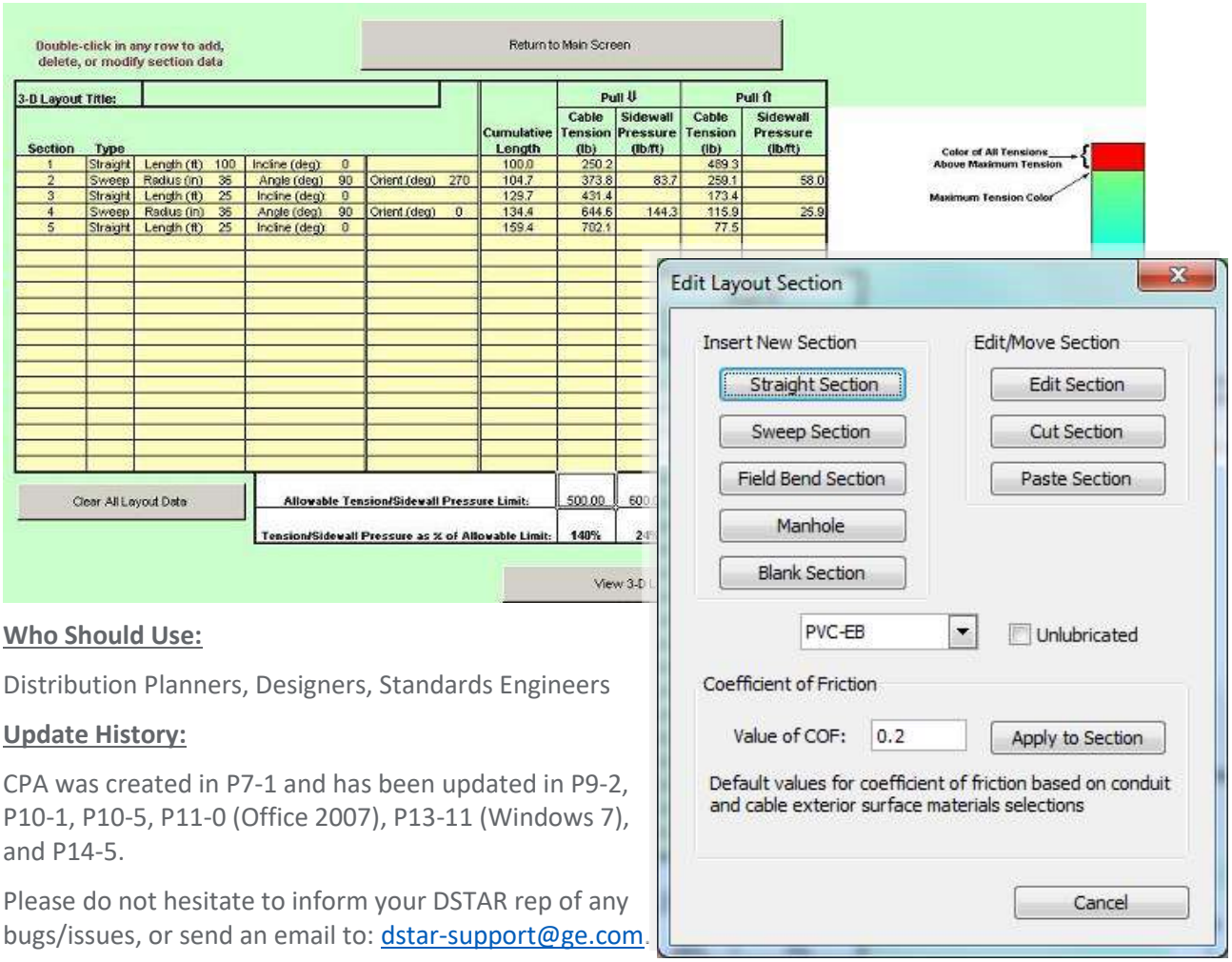
CPA will perform calculations for one to four cables in a conduit. All phase cables are assumed to have the same outside diameter. One neutral cable, included in the maximum number of four cables, can also be included. The neutral cable can have a different diameter than the phase cables.

In version 3.0, three-dimensional visualization of a conduit run was added to CPA (see graphic at bottom right). This new feature enables users to quickly visualize a scaled drawing of the cable layout in three-dimensions. The visualization tool is very flexible and allows users to rotate the drawing to verify the layout from any perspective. In addition, the tool visually shows the tension with respect to maximum allowable tension long the length of the run by shading the cable run.



For program 14, the members proposed additional enhancements to: 1) modify the existing 3-D visualization to show manholes, 2) allow the user to choose different types of conduit for each section, and 3) other interface changes and minor updates to improve the user experience.

CPA User Interface:



Who Should Use:

Distribution Planners, Designers, Standards Engineers

Update History:

CPA was created in P7-1 and has been updated in P9-2, P10-1, P10-5, P11-0 (Office 2007), P13-11 (Windows 7), and P14-5.

Please do not hesitate to inform your DSTAR rep of any bugs/issues, or send an email to: dstar-support@ge.com.

For the complete report on DSTAR Project 14-5: CPA Updates, visit www.dstar.org.

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