2024 PLS-CADD Advanced Training and User Group Meeting
What's New in PLS-GRID

PLS-GRID

Summary of changes since June 2022 User Group.
Covers versions 17.50-20.00.

PLS-GRID

PLS-GRID is an enterprise application add-on for all PLS-CADD users in a company. It can also be used by PLS-POLE or TOWER only users as a project manager for structure files. PLS-GRID is made up of three parts which are the PLS-GRID Server, PLS-GRID Desktop Application, and the PLS-GRID Web Client Application.

PLS-GRID Desktop Client features in PLS-CADD, PLS-POLE & TOWER

1. Improved **Search the GRID Map** dialog and functionality which allows zooming GRID Map View to projects, structures, circuits, specific Longitude, Latitude, or current location.

2. Added option to search by structure name in **File/PLS-GRID/Goto/Zoom**.

3. Added mini-pref to automatically prompt to check-in current project to PLS-GRID (if checked-out by the current user) when closing the project.

4. **File/PLS-GRID/Goto/Zoom...** dialog which allows zooming GRID Map View to projects, structures, circuits, or specific Longitude, Latitude location.

5. Add a Filter Circuit Label option to the Map Layers so users can show/hide specific circuits in the Map View.

6. Added ability to Map View to filter by project group affiliation.

7. Added a Circuit Label Filter tab to **File/PLS-GRID/Display Options...** so users can show/hide specific circuits in the GRID Map View.

8. Added a **Survey Data Coverage** option to the Map Layers to display a translucent rectangle over the extents of each LAZ/LAS file indexed PLS-GRID. User interactively view information about each of these files.

9. Allow searching for a structure name without first selecting a project.

10. Updated "Map Layers" dialog for enabling heat maps and other map overlay options.

11. Added Survey Point Clearances Heatmap to Map Layers options.

12. Added Survey Data Coverage to Map Layer Options in **File/PLS-GRID/Display Options...** to show regions covered by LAS/LAZ files managed by PLS-GRID's Survey Data Management and interactively show information about each file.

13. PLS-GRID server can now optionally push default settings for certain reports to all PLS-CADD clients.

14. Added option to create BAK of a project checked out from PLS-GRID that can edited by other PLS-GRID users, but only the user that checked it out can check it back in.

15. Allow PLS-CADD users without PLS-POLE or TOWER licenses to check out and check in a PLS-GRID project with PLS-POLE and TOWER models as long as those models are not modified.

16. When using **File/Backup...** on a PLS-GRID project, added an option to make the restored project modifiable.

17. When adding a project, the user can now select one or more ACL groups that they currently belong to, to grant access to everyone in those groups. Also allow specifying read-only access for all selected groups.

18. Allow non-admin desktop users to purge map data as long as they have read/write ACL access.

19. Updated to PROJ 9.4.0, which includes many newly integrated EPSG coordinate system definitions.

20. Improved the organization of Structure Loads reports generated by Grid Analytics to show one at a time when snapped to a structure.

21. Improved error messages when **File/PLS-GRID/Add Project** fails to better explain why it failed.

22. **File/PLS-GRID/Grid Analytics...** now supports using a selected Criteria file and Feature Code file across all projects that it is running reports on.

23. Added Survey Point Clearances to **File/PLS-GRID/Grid Analytics...** with usage heat map visible in GRID Map View.

24. Vegetation Work Sites exported from the Danger Tree report of **File/PLS-GRID/Grid Analytics...** including the ability to snap to worksites in the GRID Map View and see additional information about each one.

25. **File/PLS-GRID/Grid Analytics...** includes the ability to display circuit summary measurements in GRID Map View when the associated map layer is selected.

26. Added *Line Summary Report* to **File/PLS-GRID/Grid Analytics...**

27. Added Stringing Chart report to **File/PLS-GRID/Grid Analytics...**

28. Added support for *Lines/Reports/Structure Loads Report...* to **File/PLS-GRID/Grid Analytics...**

29. **File/PLS-GRID/Grid Analytics...** can now better handle PLS-CADD/LITE projects.

30. When doing a Check-In to PLS-GRID, if there are GRID Analytics results, ask the user if they want those results cleared and if so, clear them, so we won't associate old results with recent project changes.

31. When using **File/PLS-GRID/Grid Analytics...,** there is now an option to unselect a project within the defined region before the reports are run.

32. In **File/PLS-GRID/Grid Analytics...** when selecting a Criteria / Feature Code override project, it will now merge Feature Code voltages when the target project has a different set of clearance voltages than the selected override project.

33. Improved GRID Analytics vegetation worksites to draw filled in polygons, snap to worksites, and display worksite label and location.

34. Several improvements to the Vegetation Works Sites including the ability to snap to worksites in the GRID Map View and see additional information about each one.

35. PLS-GRID can now support custom WMTS servers used by the GRID Map View.

36. Added **File/PLS-GRID/Attachment Manager** which exposes the attachments pushed from the PLS-GRID server so users can hide them and or attach their own.

37. Can now configure the PLS-GRID server to push default report settings to PLS-CADD clients.

38. Added new Design Rule structure name option (sc=#) to allow using arbitrary structure comment column for structure name when using RegEx pattern.

39. Added new PLS-GRID structure naming design rule option to allow matching of specific types of structures.

40. Added **File/PLS-GRID/Rename Project** command. This command enables renaming a project while keeping the CPID and all prior revision history.

41. When using *Revert to this Revision* in Project Manager Reviewer dialog, auto populate the checkin comment with "Revert to revision <number>".

42. Support separate workspace directories per PLS-GRID server, if working with multiple PLS-GRID servers.

43. Enable sharing a project belonging to one PLS-GRID server with a different PLS-GRID server.

44. Added *Revision File List Diff* to the Revision Report for **File/PLS-GRID/Check In Project**. This will give a report on file changes (add/remove/changed, with file size changes).

45. Can now click on Project Preview in Project Reviewer and Project Discovery dialogs to get a full screen color rendering of the preview.

46. Added title bar button to PLS-GRID dialogs to open the currently configured workspace directory.

47. PLS-GRID now detects low bandwidth connections and automatically compresses data to speed up file transfers.

48. In **File/PLS-GRID/Project Discovery**, added option to mark projects as "Favorites" from the context menu, and user can toggle between showing all / only showing favorites with a checkbox.

49. In **File/PLS-GRID/Project Discovery**, added option to filter by projects group affiliation.

50. Improved search in **File/PLS-GRID/Project Discovery** to specify what to search (project names, general data, etc) and directly access recent and saved search queries from a dropdown list.

51. Added the ability to filter by project group affiliation to the Advanced Query options in **File/PLS-GRID/Project Discovery**.

52. Add new command *Show Results in GRID View* to **File/PLS-GRID/Project Discovery** which applies the current Discovery filters to the GRID Map View window.

53. Added button to **File/PLS-GRID/Project Reviewer** to attach Pending Reference Files which are photos uploaded through the PLS-GRID web client. These photos can be added to the project's Reference Manager or to a Structure Comment field for the structure nearest to the photo's geographic location.

54. Improved the readability of the Grid View window by adjusting the size of text labels and symbols as it is zoomed in and out.

55. In **File/PLS-GRID/Project Reviewer** List of Files will group files and show subdirectory names for "Components", "Loads", "References", and "Attachments".

56. In **File/PLS-GRID/Project Reviewer** List of Files use a highlight color when there are multiple files with the same content (e.g. structure component files).

57. Improved the Voltage Legend in the Grid View window by grouping consecutive voltages that share the same line properties (color/style/thickness) and added a checkbox to **File/PLS-GRID/Display Options...** to toggle this on/off.

58. Added Lock Snap Entity option to **Context/Entity Info/Change Snap Settings** in the Grid View to disable their mouse from snapping to new elements so user can interact with Property Overlay scroll bars without changing the selection.

59. Improved detection and notification of changes made to external reference files when using the Reference Manager and checking a project in to PLS-GRID.

60. Added menu item **Drafting/Structure and Section Labeling/Grid View** to support unique structure label settings for Grid view.

61. For TPS reports and when doing a Check In, added a warning if more than 20 files for PLS-CADD or 4 files for PLS-POLE or TOWER have been removed.

62. When checking in a project with many files that are about to be removed, show a report dialog with the affected files so that the user can review the files before responding.

63. Improved layout and details of File List Diff between revisions.

64. Added more MapBox layers to the PLS WMTS Proxy service.

PLS-GRID Web Client

1. PLS-GRID Web Client now supports IdP (Identity Provider) initiated Single Sign-On (SSO) via the SAML

standard.

    1.1. Configured automatically via metadata XML file provided by IdP.

    1.2. Supports IdP initiated login redirection to force users to IdP login portal before accessing PLS-GRID Web Client.

    1.3. Supports automatically adding new web client users that are allowed access by IdP.

2. Added "Survey Data Management" admin page in web client. It has options to begin scan of survey data, display information about each file found, and buttons to download an XML or text file of the that information.

3. Added search functionality in Survey Data Management admin page.

4. Enabled automated aggregated activity reporting.

5. Added ability to manually calibrate model image with camera image in Augmented Reality view.

6. Added ability to see vegetation worksites in GRID Augmented Reality (AR) view.

7. Added ability to upload photos from devices in the field using the Web Client.

8. Web client can access reference files from PLS-CADD projects with no coordinate system assigned.

9. Added permission setting to users and groups such that "Read Only" or "Read/Write" can apply to all current and future projects.

10. Added *Reload Config* button to the Admin Home panel to reload some server configuration settings without restarting the server.

11. Added buttons to the Admin Home page to download, upload, and revert server and client config files.

12. Added new section to Admin homepage for Project Manager metadata.

PLS-GRID Server

1. Now support Webhook notifications for certain PLS-GRID server system events. Configurable via WebhookNotifyURL string in pls_grid.json.

2. Added webhook notifications when projects are added/updated and when milestones are added/removed.

3. Added a flag to identify external users more easily (i.e. contractors).

4. Added mechanism to allow IT admins to add whatever custom response headers they require, in order to pass their security scans.

5. Significantly reduced latency of serving Grid Map data to both Desktop and Web Clients (> 10x for some common cases).

6. Added configuration option for a nightly database integrity check.

7. Added configuration options to automatically install server upgrades (using the specified type, on the

specified day of the week).

8. Can now apply privilege flags (i.e. admin, add projects, etc.) to groups.

9. Now support binding multiple certificates to a single port via Server Name Indication (SNI).

10. Updated configuration options for iTwin synchronization.

11. Added contractor access logic to automatically create and add new users to an ACL group named for the licensed user's company.

12. Let "ContractorAccess" settings apply to internal users too, if configured for the internal client ID.

Videos and Technical Notes

1) New Videos

   a) PLS-Grid Webinar (YouTube): https://youtu.be/b7_4U3VLhcE

   b) PLS-Grid Overview (YouTube): https://youtu.be/B_lL-31XsdI

   c) PLS-Grid Project Manager (YouTube): https://www.youtube.com/watch?v=UUZDwMKQi_s

   d) PLS-GRID Project Templates (YouTube): https://www.youtube.com/watch?v=VlrDun9kgcM&t=1s

2) New Technical Notes

   a) Augmented Reality with PLS-GRID: https://www.powline.com/technotes/PLS-GRID_Augmented_Reality.pdf

   b) PLS-Grid Overview (product sheet): https://www.powline.com/products/PLS-Grid_Overview.pdf

   c) PLS-Grid Project Manager (white paper): https://www.powline.com/technotes/PLS-GRID_Project_Manager_Whitepaper.pdf

   d) PLS-Grid Workflow (Tech Note): https://www.powline.com/technotes/PLS-GRID_Workflow.pdf