PowerWorld Simulator
Data View Dialog

Jamie Weber, Ph.D.

Director of Software Development

PowerWorld Corporation

2001 South First Street
Champaign, Illinois 61820
+1 (217) 384.6330

support@powerworld.com
http://www.powerworld.com

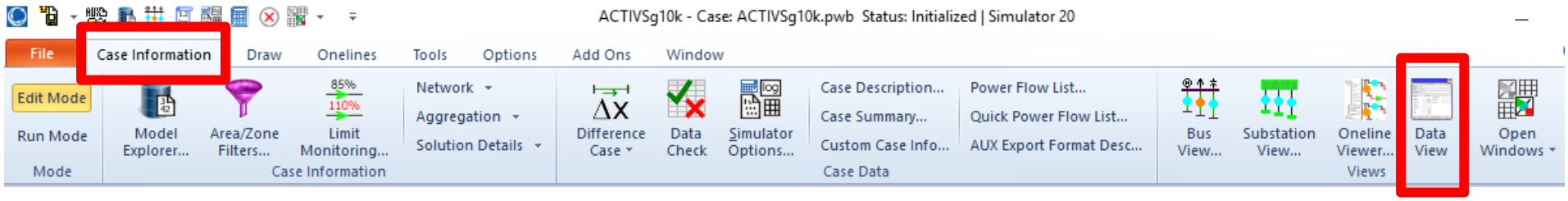
History

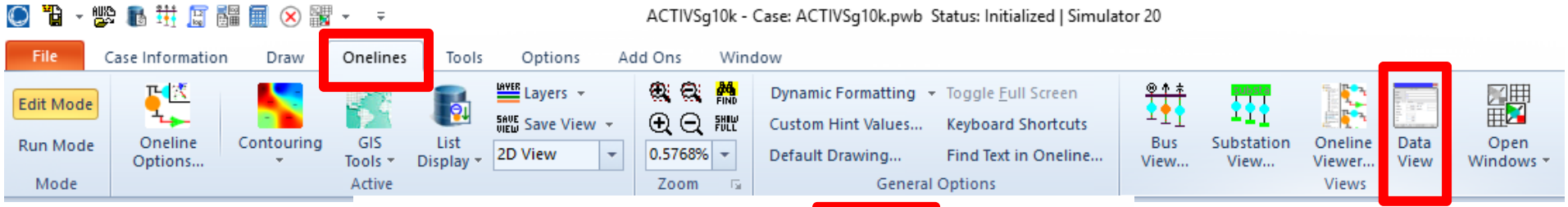
- June 2017 WECC PowerWorld User's Group Meetings: Users expressed the need to
  - Create customized user interface dialogs
  - Have those dialogs update automatically when navigating a oneline diagram or Bus View

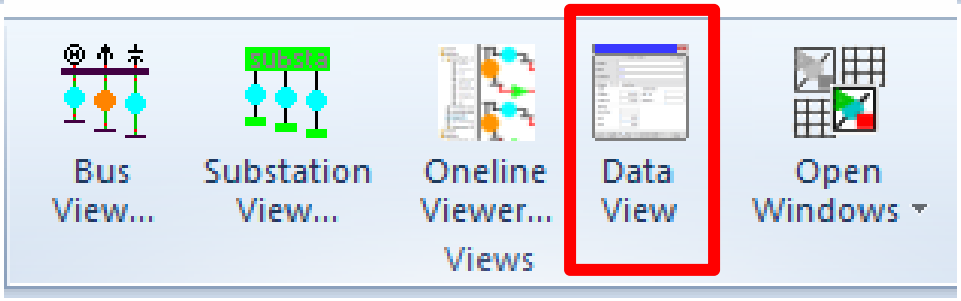
- This let to the creation of the Data View Dialog that does this within a month after that meeting
- Moral
  - Attend these client and user meetings and ask for things: it just might work ☺

Accessing the Data View

- On Case Information and Onelines Ribbon Tabs
  - https://www.powerworld.com/WebHelp/#MainDocumentation_HTML/Data_View.htm

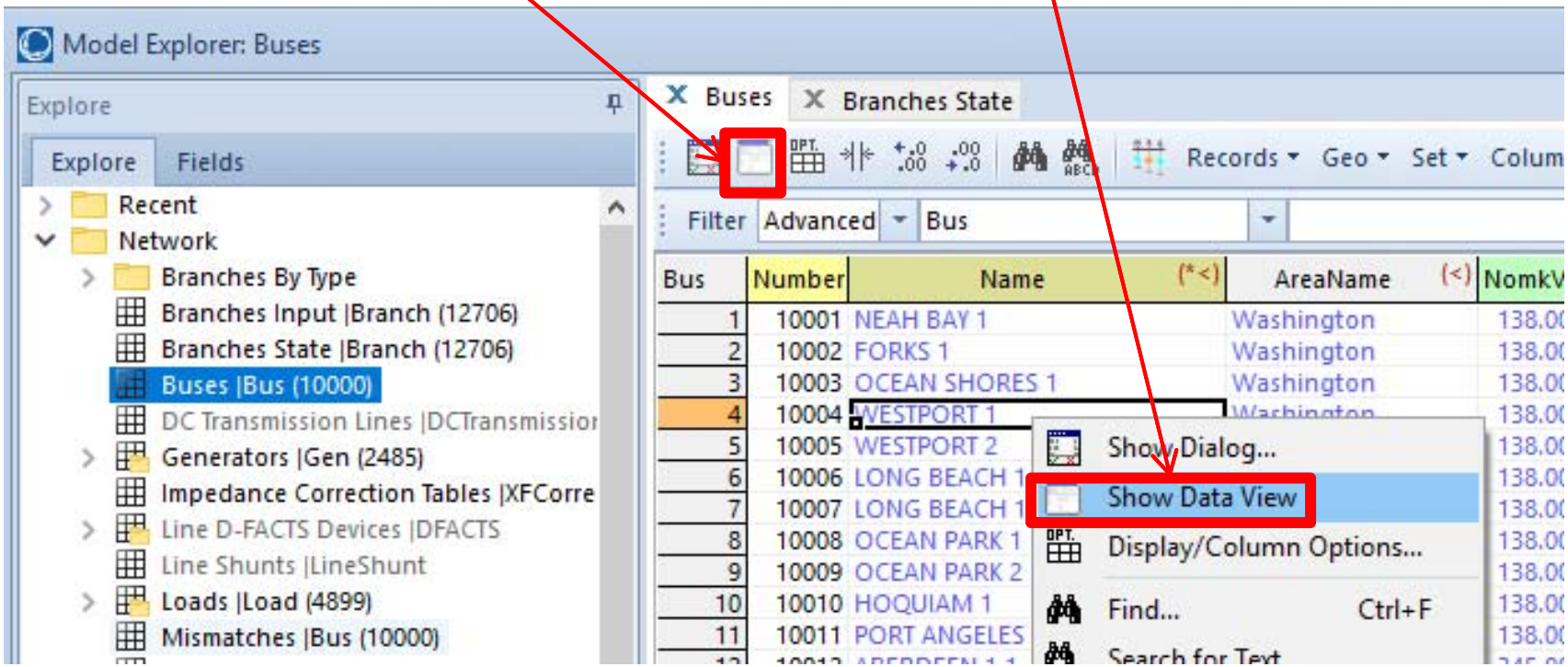






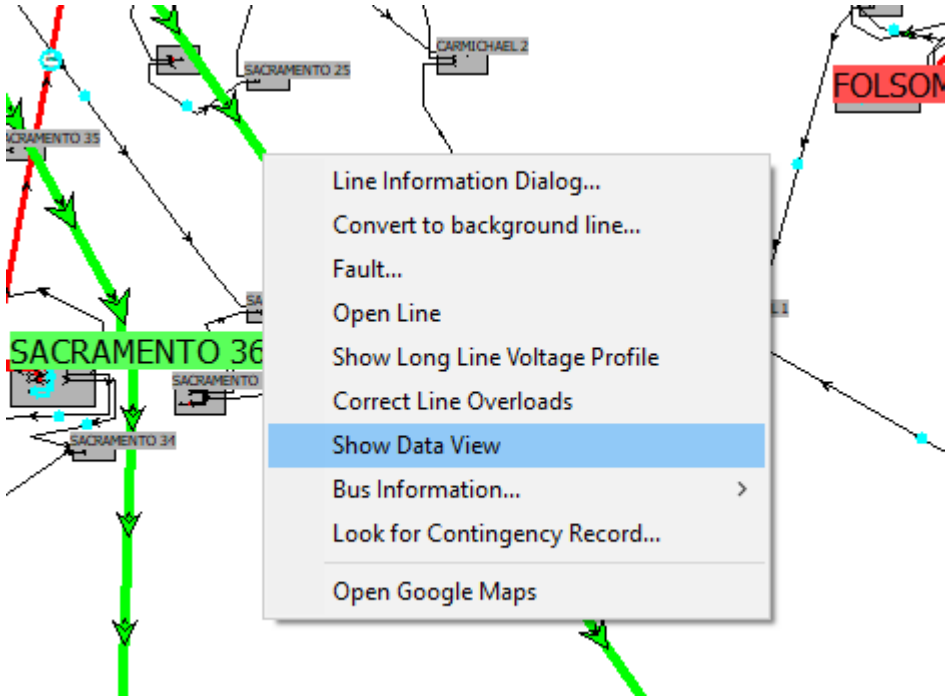
Accessing the Data View

- Right-Click on Case Information Displays or use Case Information Toolbar



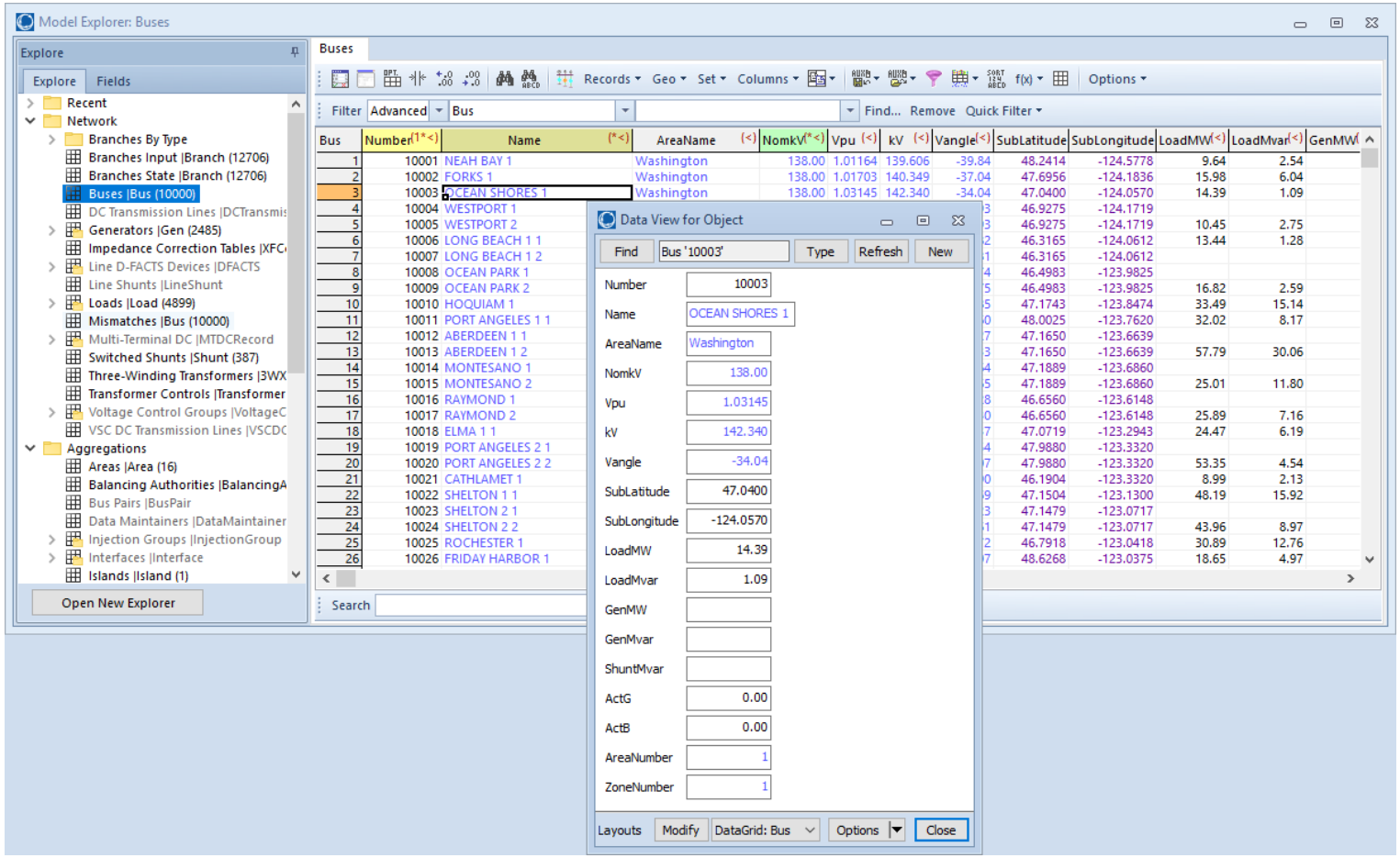
Accessing the Data View

- Right-Click on Oneline objects



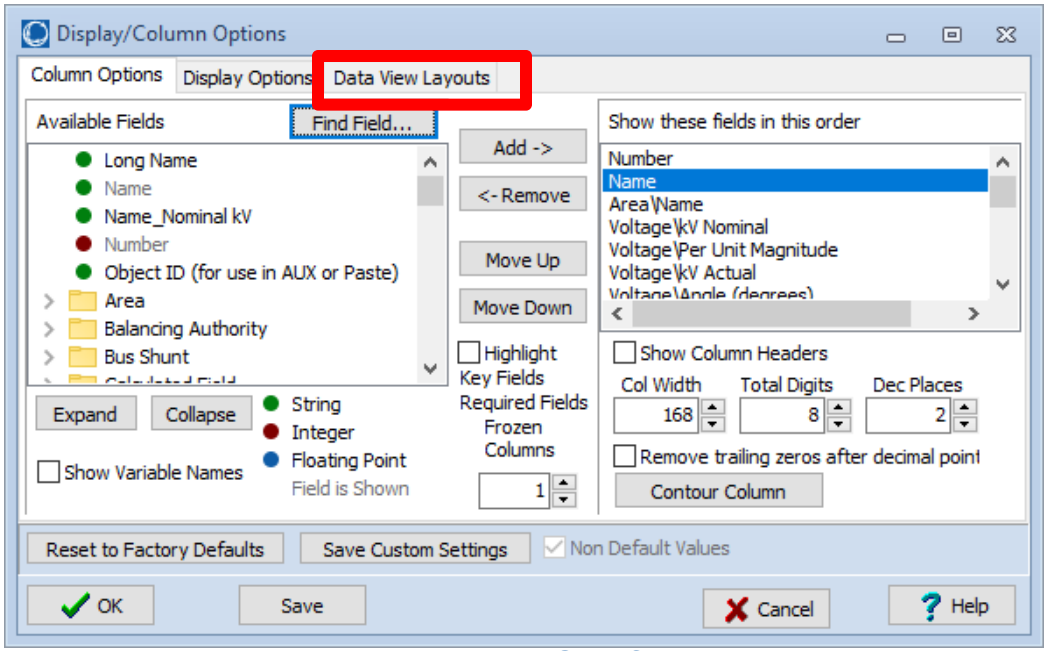
What does a Data View Show?

- One row of a case information display



Defining a Data View

- Data View use the SAME object as
  - Customized case information display
  - User-defined case information display
- Display/Column Options on a case information

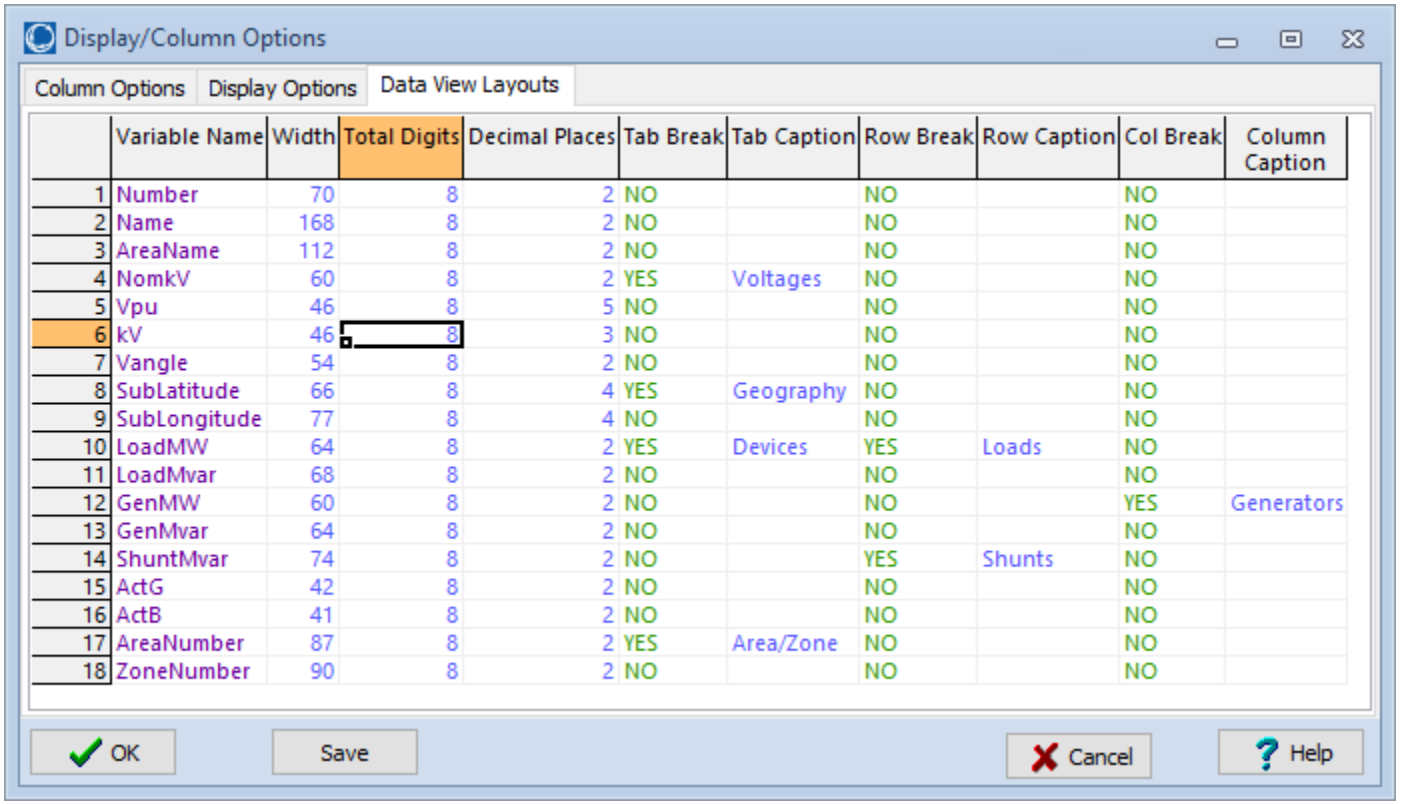


https://www.powerworld.com/WebHelp/#MainDocumentation_HTML/Configuring_the_Case_Information_Displays.htm

How To Edit Customize Data View

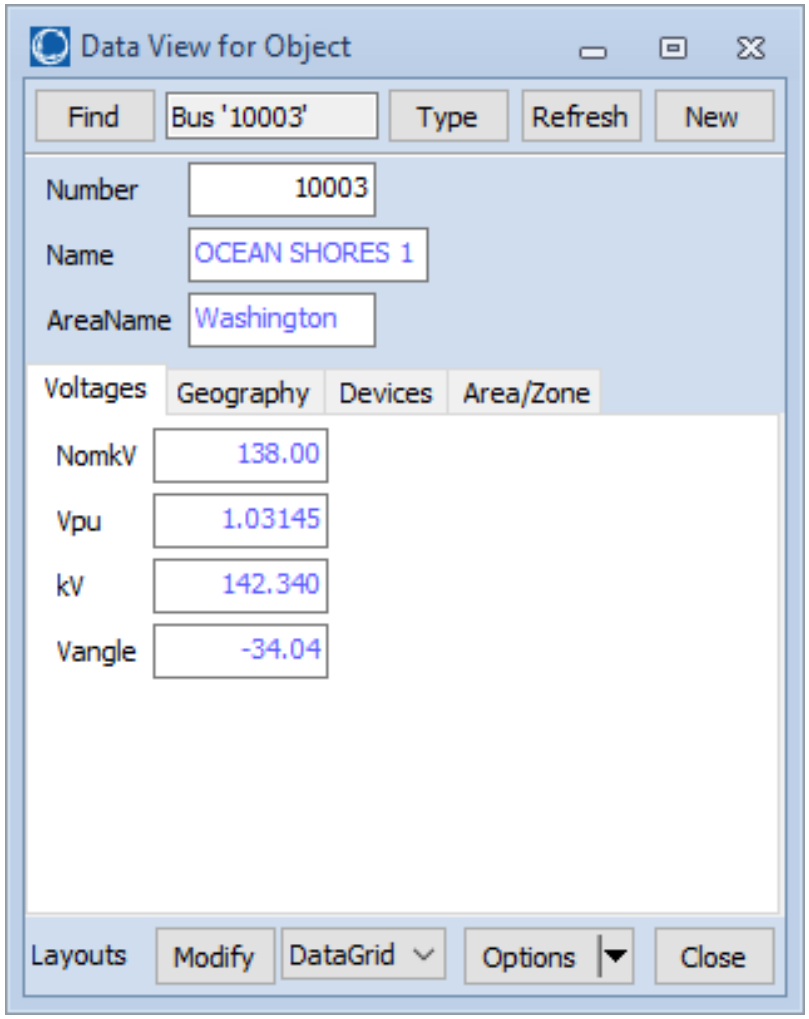
- Data View Layouts on the Display/Column options dialog
  - This is how they are actually stored internally in Simulator, but this can be a bit weird to look through
- Right-Click on field in the Data View itself
- Use the Customization Pane

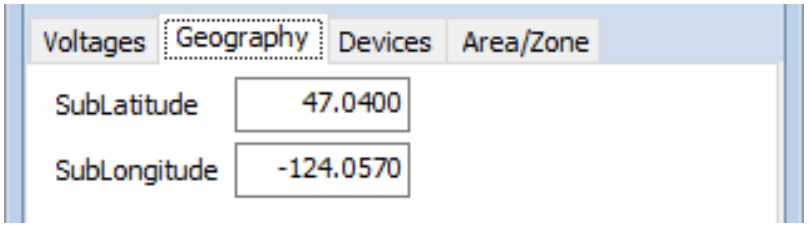
Data View Layouts on Display/Column Options dialog

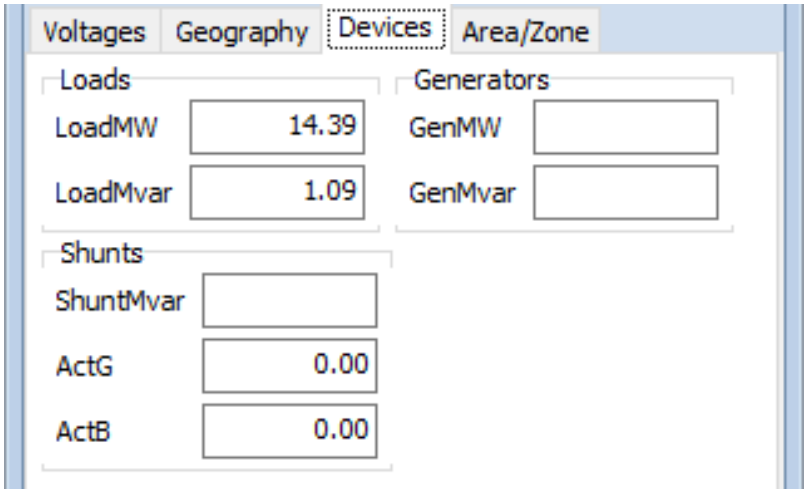


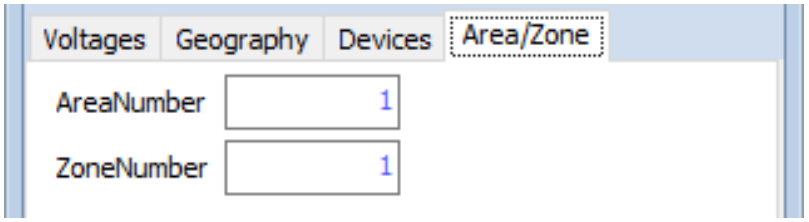
	Variable Name	Width	Total Digits	Decimal Places	Tab Break	Tab Caption	Row Break	Row Caption	Col Break	Column Caption
1	Number	70	8	2	NO		NO		NO	
2	Name	168	8	2	NO		NO		NO	
3	AreaName	112	8	2	NO		NO		NO	
4	NomkV	60	8	2	YES	Voltages	NO		NO	
5	Vpu	46	8	5	NO		NO		NO	
6	kV	46	8	3	NO		NO		NO	
7	Vangle	54	8	2	NO		NO		NO	
8	SubLatitude	66	8	4	YES	Geography	NO		NO	
9	SubLongitude	77	8	4	NO		NO		NO	
10	LoadMW	64	8	2	YES	Devices	YES	Loads	NO	
11	LoadMvar	68	8	2	NO		NO		NO	
12	GenMW	60	8	2	NO		NO		YES	Generators
13	GenMvar	64	8	2	NO		NO		NO	
14	ShuntMvar	74	8	2	NO		YES	Shunts	NO	
15	ActG	42	8	2	NO		NO		NO	
16	ActB	41	8	2	NO		NO		NO	
17	AreaNumber	87	8	2	YES	Area/Zone	NO		NO	
18	ZoneNumber	90	8	2	NO		NO		NO	

Using Tabs/Row/Column Breaks and Captions



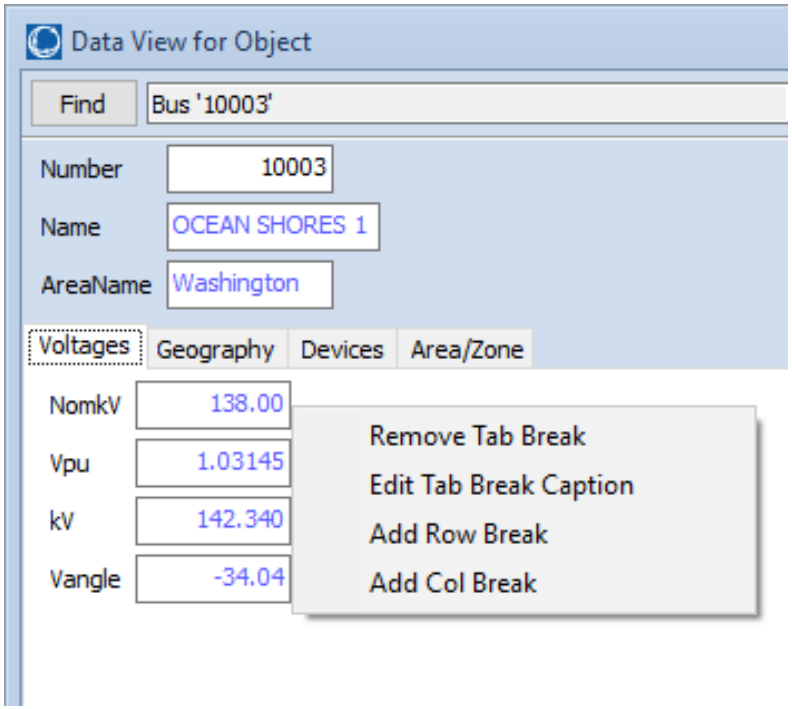






Right-Click right on Data View

- Depending on where you click, you'll get options
  - Add Tab Break
  - Remove Tab Break
  - Edit Tab Caption
  - Add Row Break
  - Remove Row Break
  - Edit Row Break Caption
  - Add Col Break
  - Remove Col Break
  - Edit Col Break Caption

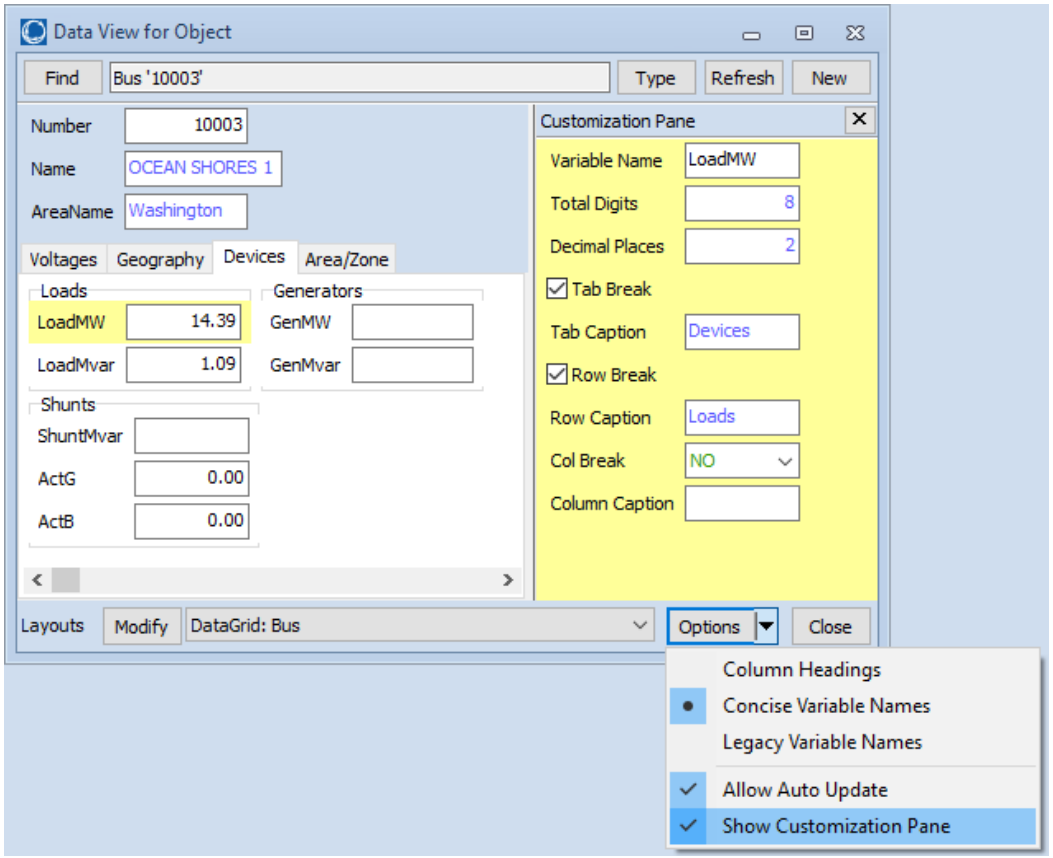


What do Breaks become?

- Tab Break
  - Fields at and after the Tab Break are moved to the next tab of a Tabbed Control (everything before the first tab goes at the top of the dialog)
  - Caption for Tab Break becomes the caption of the tab.
  - If no caption is given, a number will be used for the caption instead
- Row Break
  - Fields at and after the Row Break are moved to the next “row” of the dialog
  - If caption is specified, a group box is created with this caption
  - If no caption, then no group box either
- Col Break
  - Fields at and after the Col Breaker are moved to a new column in the present “row” of the dialog
  - If caption is specified, a group box is created with this caption
  - If no caption, then no group box either

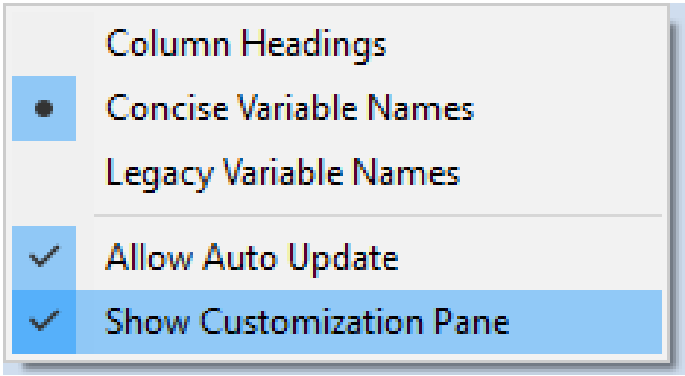
Show the Customization Pane on the Data View Dialog

- Under Options, choose Show Customization Pane
- Click on fields
  - Field will highlight in yellow
  - Customization Pane allows you to edit option for the field



Other Options

- Choose which field labels to show
  - Column Headings
  - Concise Variable Names
  - Legacy Variable Names
- Allow Auto Update
  - When this is checked, if you click on an object on a online diagram then this Data View dialog will automatically update
  - This also works *across* object types
    - Same concept as using advanced filters across object types
    - Same concept as using Calculated Fields across object types

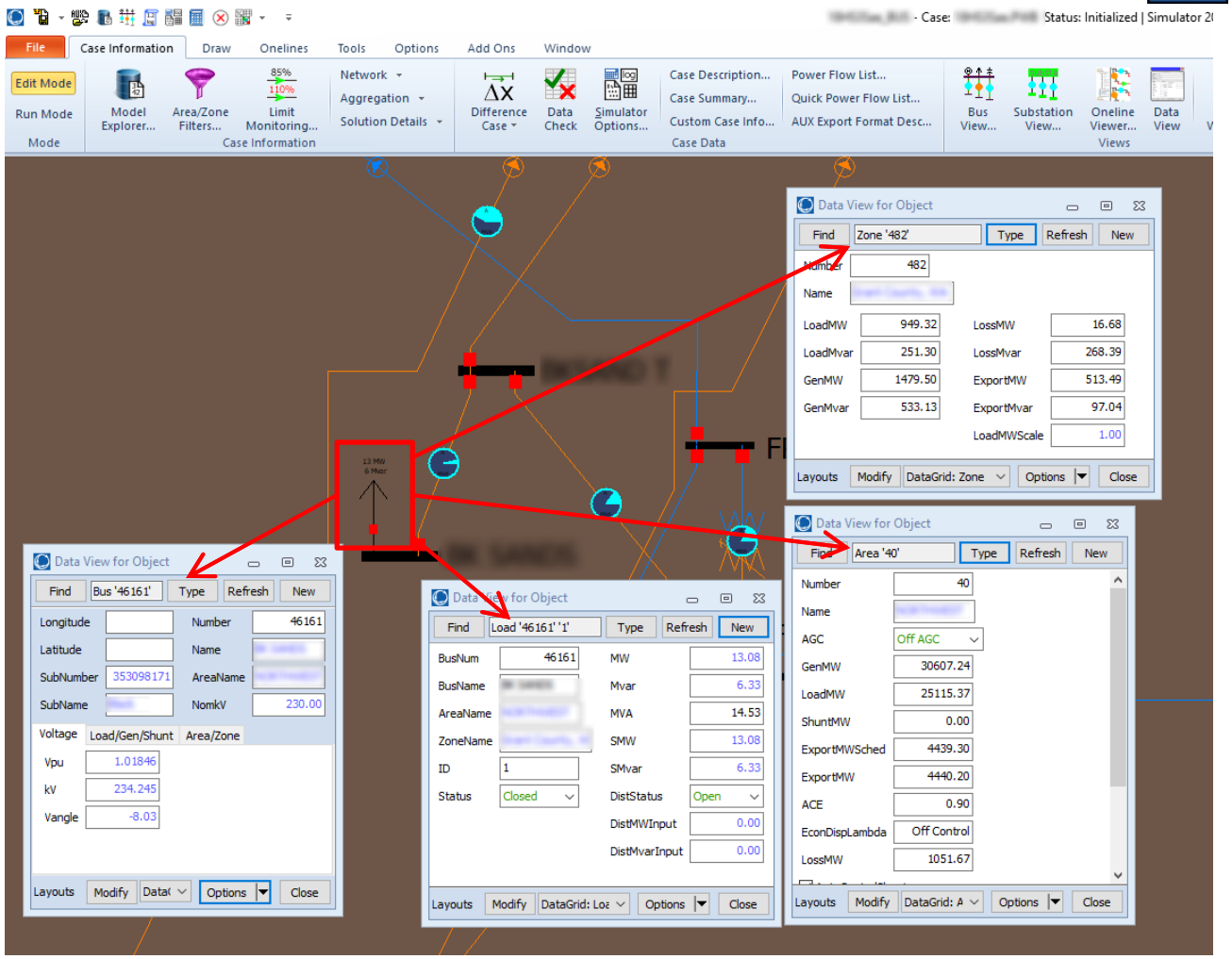


Allow Auto Update on Data View Dialogs

- Open Multiple Data View Dialogs different object types
  - Example, Load, Bus, Area, and Zone
- Click on a Load object on a oneline
  - Load Data View will update as expected
  - Bus Data View for terminal bus of generator will update
  - Area Data View for the Area to which the generator belongs will update
  - Zone Data View for the Zone to which the generator belongs will update

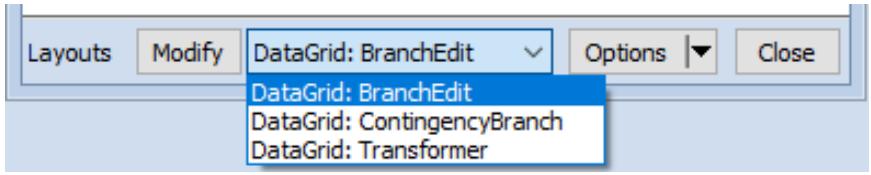
Allow Auto Update on Data View Dialogs

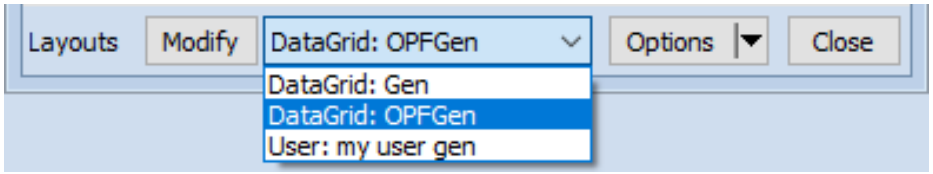
Click on Load All 4 Data View Dialogs update



Data Grid Layouts List: Bottom of Data View Dialog

- There is a list at the bottom of the Data View Dialog
- This list shows all the presently customizable grids in Simulator that you have *already customized*
- It will also show any User-Defined Case Information Displays that you may have created in the Model Explorer
  - The user-defined case info grids essentially give you the ability to create your own dialogs!

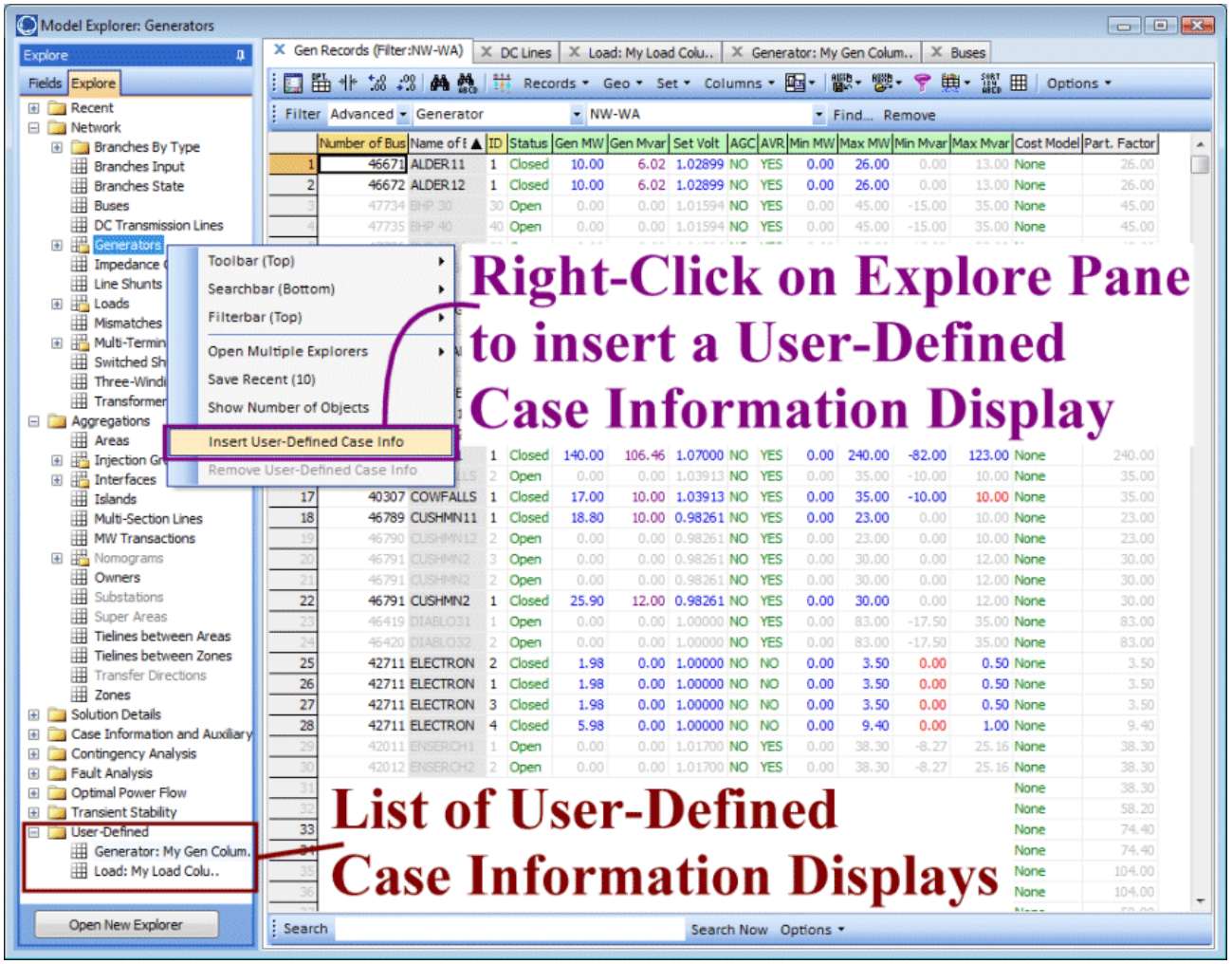




User-Defined Case Information Displays

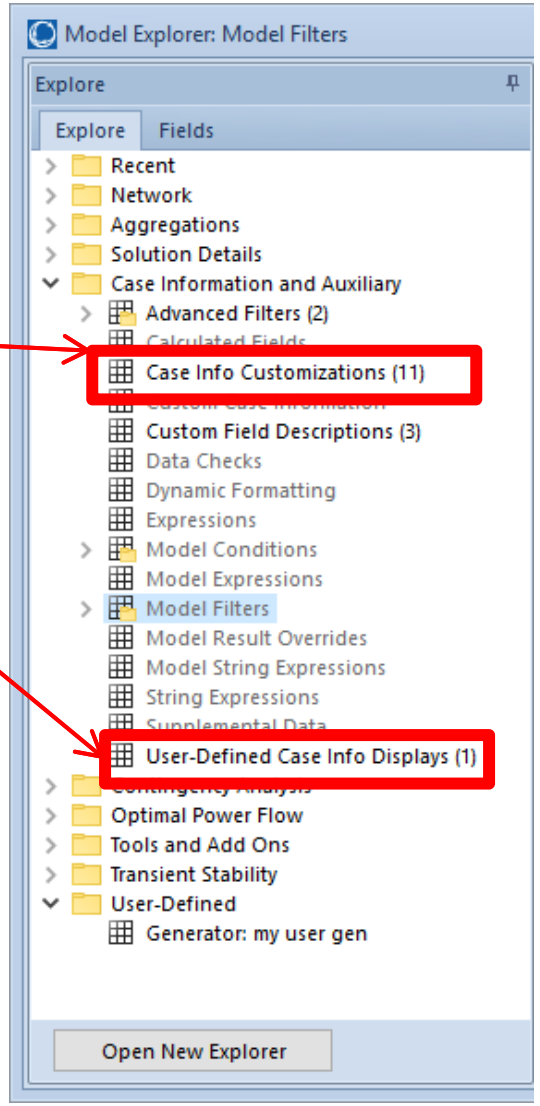
- Help documentation link
  - https://www.powerworld.com/WebHelp/#MainDocumentation_HTML/Model_Explorer_User_Defined_CaseInformation.htm
- Right-click on the Explore Pane on the left of the Model Explorer to **Insert** or **Remove** User-Defined Case Info display

Insert/Remove User-Defined Case Information Displays



Passing Settings Between Cases: Use Auxiliary Files

- Objects you want to save
  - DataGrid
  - UserDefinedDataGrid
- Available on the Model Explorer under Case Information and Auxiliary Folder



Navigate to those Displays Save as Auxiliary

```
DataGrid (Name,FilterPre,Filter,FontNonDefault,RowHeight,FontName,FontStyles,FontSize,
          FontColor,SortVariable,SortOrder,Zoom,FrozenCols)
{
"Bus" "YES" "" "NO "     13 "Segoe UI" ""      8      0 "" "Low To High" 100.00 -1
   <SUBDATA ColumnInfo>
     "Number"                70  8 2
     "Name"                 168  8 2
     "AreaName"             112  8 2
     "NomkV"                 60  8 2 YES "Voltages"
     "Vpu"                   46  8 5
     "kV"                    46  8 3
     "Vangle"                54  8 2
     "SubLatitude"           66  8 4 YES "Geography"
     "SubLongitude"          77  8 4
     "LoadMW"                64  8 2 YES "Devices"   YES "Loads"
     "LoadMvar"              68  8 2
     "GenMW"                 60  8 2 NO  ""          NO  ""       YES "Generators"
     "GenMvar"               64  8 2
     "ShuntMvar"             74  8 2 NO  ""          YES "Shunts"
     "ActG"                  42  8 2
     "ActB"                  41  8 2
     "AreaNumber"            87  8 2 YES "Area/Zone"
     "ZoneNumber"            90  8 2
   </SUBDATA>
```