



# “MSVoiceCommands” MDL App for MicroStation & Based applications

India First Team, Bentley Systems, Pune.







Start Voice Command

Stop Voice Command

Audio Monitor

Speech Engine Started with Language: English (United States)

85

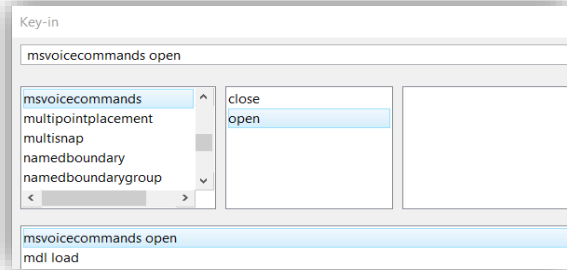
% Min. Accuracy

15

Seconds to Deactivate



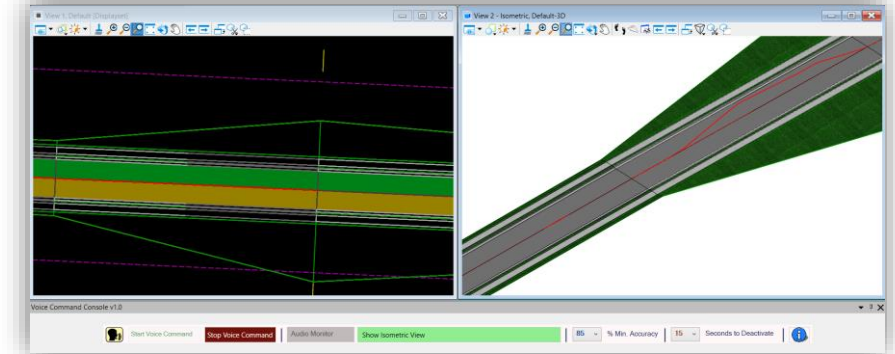
## Dockable voice command console for MicroStation & power platform-based design application



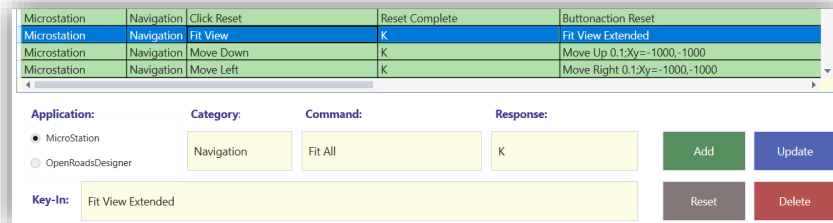
## Pre-loaded Microstation Defined Commands + Application Specific commands

Microstation	View	Show Top View
Microstation	Window	Rotate View
Microstation	Window	Window Arrange
Microstation	Window	Window Cascade
Microstation	Window	Window Four Toggle
Microstation	Window	Window Three Toggle
Microstation	Window	Window Tile
Microstation	Window	Window Two Toggle
OpenRoadsDesigner	Workflow	Assign SuperElevation to Corridor
OpenRoadsDesigner	Workflow	Create Complex Plan
OpenRoadsDesigner	Workflow	Create Complex Profile
OpenRoadsDesigner	Workflow	Create Corridor
OpenRoadsDesigner	Workflow	Create Named Boundary Plan

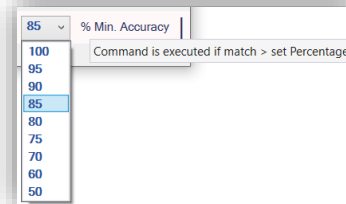
## Voice commands for frequently used tasks & console would execute Key-In action for you



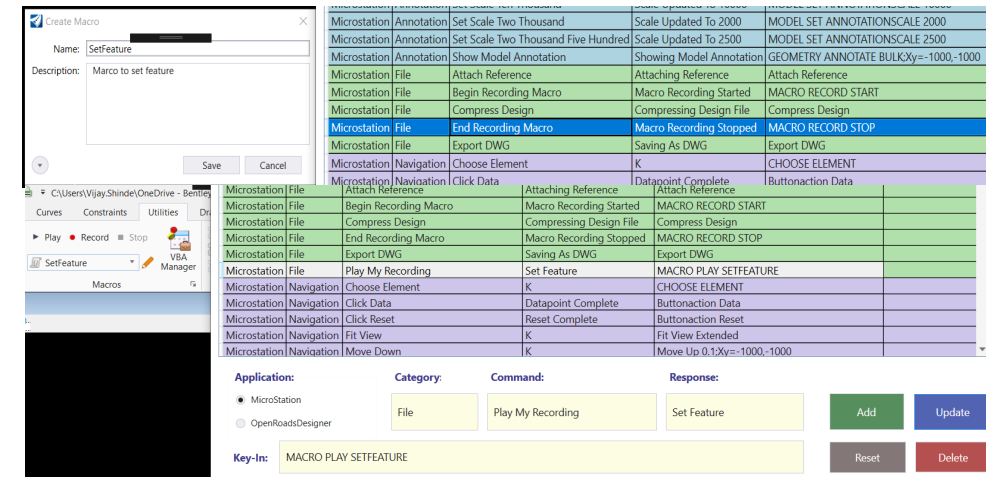
## Flexibility to Add new & modify existing commands



## Configurable Command matching accuracy



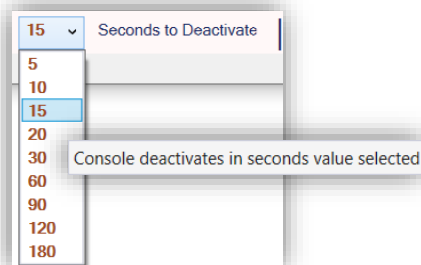
## Record Utility Macros & Invoke on Voice Commands



## Preloaded Mapped AutoCAD commands for easy Adoption of Microstation

Microstation	DrawingProduction	Set Scale Two Thousand	Scale Updated To 2000	MODEL SET ANNOTATIONSCALE 2000
Microstation	DrawingProduction	Show Model Annotation	Showing Model Annotation	GEOMETRY ANNOTATE BULKXy--1000,-1000
Microstation	DWG	DGN 3d face	K	dwg 3dface
Microstation	DWG	DGN 3d poly	K	dwg 3dpoly
Microstation	DWG	DGN a u prec	K	dwg auprec
Microstation	DWG	DGN a units	K	dwg aunits
Microstation	DWG	DGN arc	K	dwg arc
Microstation	DWG	DGN area add	K	dwg area add
Microstation	DWG	DGN area object	K	dwg area object
Microstation	DWG	DGN area points	K	dwg area points
Microstation	DWG	DGN array	K	dwg array
Microstation	DWG	Double click on command to listen to correct pronunciation of command.		
Microstation	DWG	DGN b hatch	K	dwg bhatch

## Configurable Deactivation trigger to avoid accidental commands

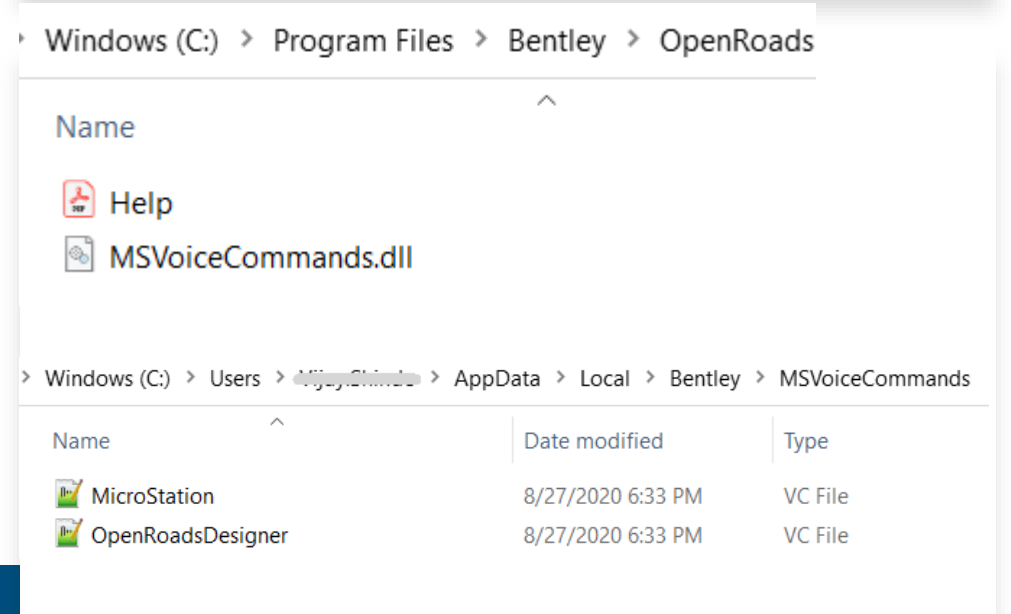
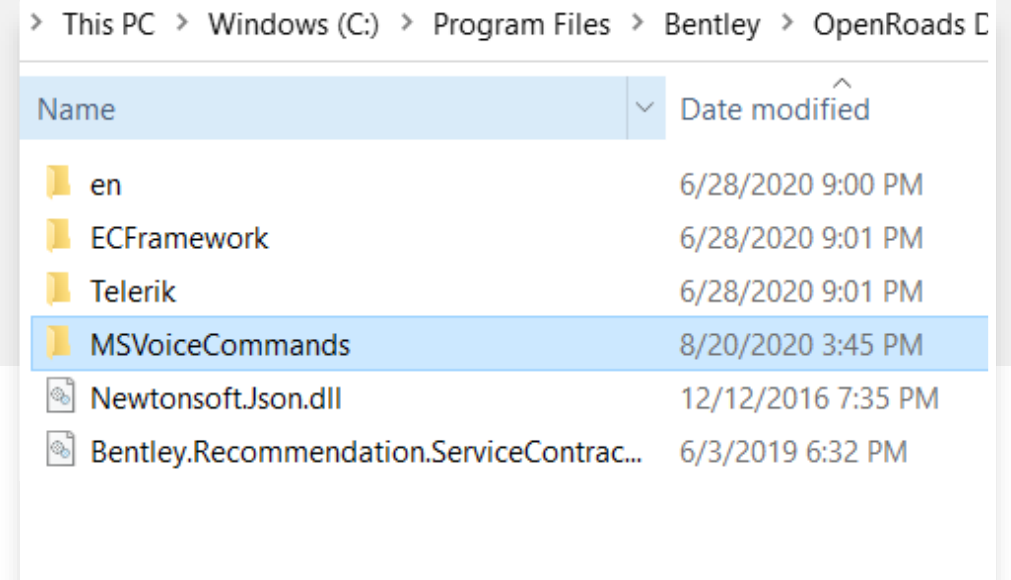


# What is “MsVoiceCommands” MDL Application?

- It's a utility which works on any MicroStation based design application for ex. OpenRoads, OpenBridge, OpenPlant etc.
- You can give Voice Commands for all generally used key-In tasks like Zoom in, Zoom Out Pan, Attach Reference, Show Model Annotation etc. & many more commands
- Application listens to your commands & upon matching, it performs the Key-In action in the background
- You can save lot of time clicking on various options while working
- You can anytime put on Sleep or Close commands console
- You can also add your commands along with Key-In action & it would perform the action for you the next moment

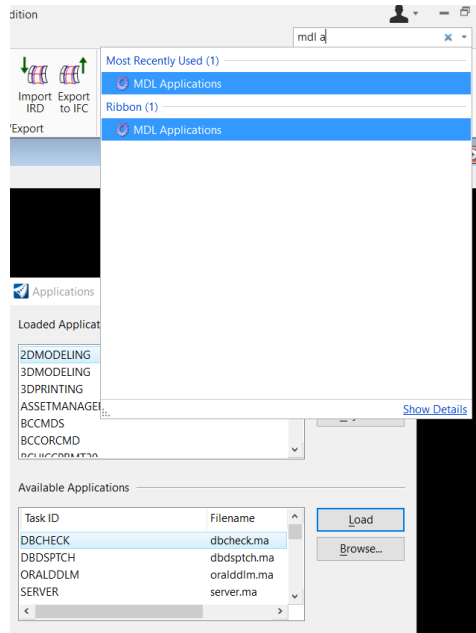
# Step1 for Installation

1. Download utility & Save to your local machine
2. Unzip & Save the utility folder at Design Application Path
  - **For Ex.** C:\Program Files\Bentley\OpenRoads Designer CONNECT Edition\OpenRoadsDesigner\Assemblies\MSVoiceCommands
3. Please make sure you have a DLL and help document in the folder as shown picture. Later when you start the Voice Command two '.vc' files will created within folder 'AppData\Local\Bentley\ MSVoiceCommands'



# Step2: Load Utility in Design Application

1. Open your Bentley Design application
2. Search “MDL Application” in Search Ribbon on right top
3. It would open the Application window
4. “Browse” to the “MSVoiceCommands.dll” file in your folder. Click OK.
5. Please make sure you get success message at the Status bar as shown below



Windows (C:) > Program Files > Bentley > OpenRoads

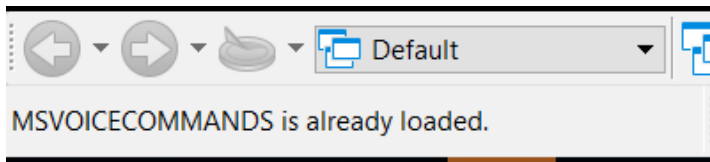
Name



Help



MSVoiceCommands.dll



# Step3: Run the Application

1. Open KeyIn Windows & run KeyIn: **msvoicecommands open**
2. This would open a Floating window
3. Try to Dock it to bottom of your application
4. Click on Help Button to check commands list first
5. Double Click on the Row to Listen to the command pronunciation & try to speak the same way
6. Once you are familiar with List of Commands, Click on “Start Voice Command” button in Voice Command Console & start giving commands

Key-in

msvoicecommands open

msvoicecommands  
multipointplacement  
multisnap  
namedboundary  
namedboundarygroup

close  
open

msvoicecommands open

mdl load

Voice Commands Help v1.0

Application	Category	Command	Response
MicroStation	Drawing/Production	Edit Text	TEXTEDITOR MODIFY
MicroStation	Drawing/Production	Hide Model Annotation	GEOMETRY UNANNOTATE BULKY--1000,-1000
MicroStation	Drawing/Production	Measure Angle	CHOOSE ELEMENTS MEASURE ANGLE
MicroStation	Drawing/Production	Measure Distance	SET PARAMETERS MEASURE DISTANCE ICON
MicroStation	Drawing/Production	Place Label	SET PARAMETERS DOCCENTER PLACE LABEL
MicroStation	Drawing/Production	Place Table	SET PARAMETERS PLACE TABLE EMPTY
MicroStation	Drawing/Production	Place Text	TEXTEDITOR PLACE
MicroStation	Drawing/Production	Place Text Along	TEXTEDITOR PLACALONG
MicroStation	Drawing/Production	Set Scale Five Hundred	Scale Updated To 500 MODEL SET ANNOTATIONS SCALE 500
MicroStation	Drawing/Production	Set Scale Five Thousand	Scale Updated To 5000 MODEL SET ANNOTATIONS SCALE 5000
MicroStation	Drawing/Production	Set Scale Ten Thousand	Scale Updated To 10000 MODEL SET ANNOTATIONS SCALE 10000
MicroStation	Drawing/Production	Set Scale Two Thousand	Scale Updated To 2000 MODEL SET ANNOTATIONS SCALE 2000
MicroStation	Drawing/Production	Show Model Annotation	Showing Model Annotation GEOMETRY ANNOTATE BULKY--1000,-1000
MicroStation	File	Attach Reference	Attaching Reference Attach Reference
MicroStation	File	Begin Recording Macro	Macro Recording Started MACRO RECORD START
MicroStation	File	Compress Design	Compressing Design File Compress Design
MicroStation	File	End Recording Macro	Macro Recording Stopped MACRO RECORD STOP
MicroStation	File	Export DWG	Saving As DWG Export DWG
MicroStation	Navigation	Choose Element	K CHOOSE ELEMENT
MicroStation	Navigation	Click Data	Datapoint Complete Buttonaction Data
MicroStation	Navigation	Click Reset	Reset Complete Buttonaction Reset
MicroStation	Navigation	Fit View	K Fit View Extended
MicroStation	Navigation	Move Down	K Move Up & Down--1000,-1000

Application: MicroStation  
Category: Navigation  
Command: Choose Element  
Response: K

Key-In: CHOOSE ELEMENT

Add Update  
Reset Delete

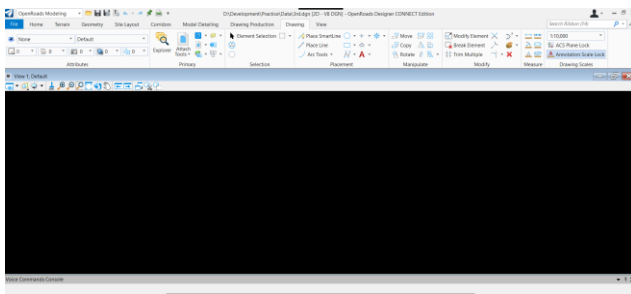


Voice Command Console v1.0



Start Voice Command

Stop Voice Command

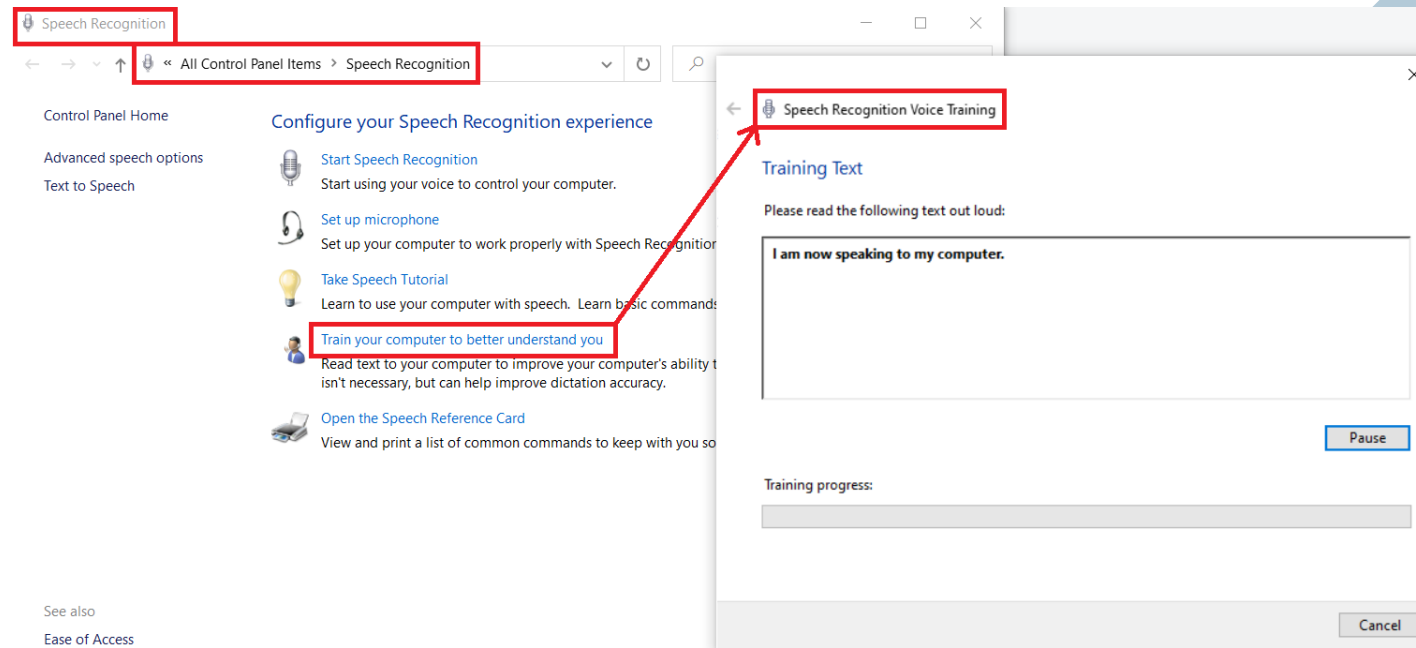


# Step4: How to use in your application ?

1. Click on the “Start Voice Command” for application to start listening to your commands
2. Upon identifying command successfully it would speak back
3. To know more about how commands should be given properly, Open Help Window and Double click on Command. Try to speak in the same way. (Use Voice Command: **Show Commands**)
4. Commands are categories in various operation, please try to run it most of them to understand how it works
5. You can set the % accuracy for matching commands. Higher the accuracy it would not misunderstand your command. Lower the accuracy, it might pick up unwanted commands. Please set the accuracy as per your experience of Voice Commands.
6. Command console automatically deactivates after 15 seconds (configurable) to avoid listening to command accidentally.
7. You can make Voice Command mode Sleep by saying Command “**Take a break**”. It would not listen to any commands accidentally in sleep mode.
8. To activate console, you can say : “**Hello**”
9. To stop Voice Command Console say: “**Stop Voice Command**”

# Step5: Tips & Tricks for MSVoiceCommands Application

1. Train speech engine on your machine with your voice for better result. Type “Speech Recognition” in windows search box to open the settings dialog.
2. If some commands are not getting identified for your voice you can change those commands to any other text to make it work for you from the Voice Command Help Window.
3. For ex. Fit view” command can be changed to “Fit All” if you wish



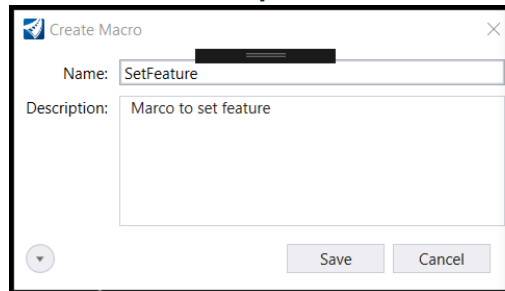
Microstation	Navigation	Click Reset	Reset Complete	Buttonaction Reset
Microstation	Navigation	Fit View	K	Fit View Extended
Microstation	Navigation	Move Down	K	Move Up 0.1;Xy=-1000,-1000
Microstation	Navigation	Move Left	K	Move Right 0.1;Xy=-1000,-1000

<b>Application:</b>	<b>Category:</b>	<b>Command:</b>	<b>Response:</b>		
<input checked="" type="radio"/> MicroStation <input type="radio"/> OpenRoadsDesigner	Navigation	Fit All	K	Add	Update
<b>Key-In:</b>	Fit View Extended			Reset	Delete

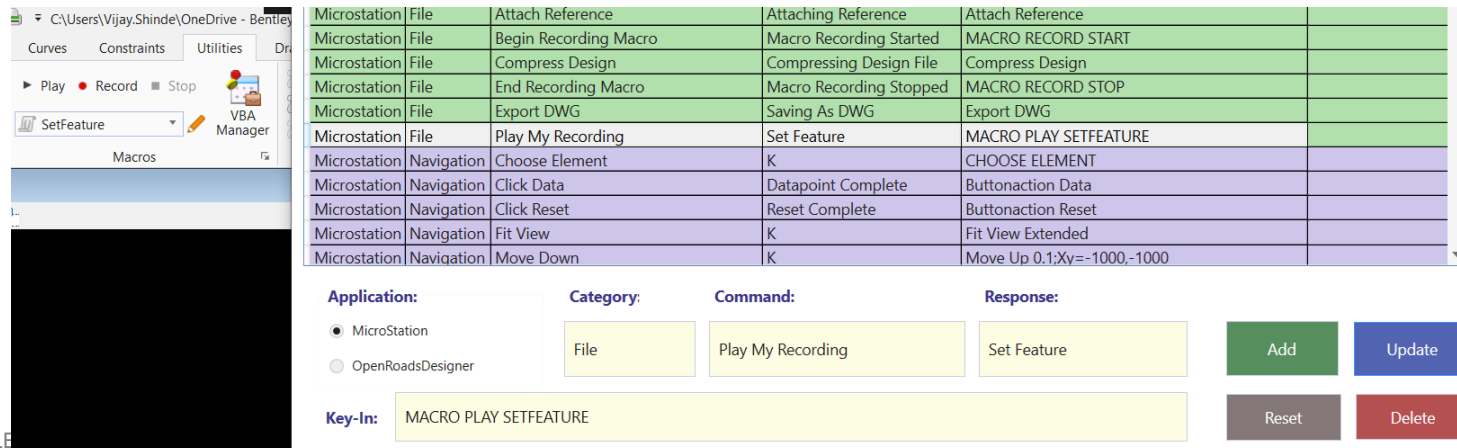


# Step5: Tips & Tricks for MSVoiceCommands Application

1. To know more about how commands should be given properly, Open Help Window and Double click on Command. Try to speak in the same way
2. Commands are categorized in various operation, please try to run few basic commands to understand how it works
3. You Can record set of Actions in a Macro using command: **Begin Recording Macro** > Execute you actions which you want to repeat > **End Recording Macro**



Microstation	Annotation	Set Scale Two Thousand	Scale Updated To 2000	MODEL SET ANNOTATIONSCALE 2000
Microstation	Annotation	Set Scale Two Thousand Five Hundred	Scale Updated To 2500	MODEL SET ANNOTATIONSCALE 2500
Microstation	Annotation	Show Model Annotation	Showing Model Annotation	GEOMETRY ANNOTATE BULK;Xy=-1000,-1000
Microstation	File	Attach Reference	Attaching Reference	Attach Reference
Microstation	File	Begin Recording Macro	Macro Recording Started	MACRO RECORD START
Microstation	File	Compress Design	Compressing Design File	Compress Design
Microstation	File	End Recording Macro	Macro Recording Stopped	MACRO RECORD STOP
Microstation	File	Export DWG	Saving As DWG	Export DWG
Microstation	Navigation	Choose Element	K	CHOOSE ELEMENT
Microstation	Navigation	Click Data	Datapoint Complete	Buttonaction Data



Microstation	File	Attach Reference	Attaching Reference	Attach Reference	
Microstation	File	Begin Recording Macro	Macro Recording Started	MACRO RECORD START	
Microstation	File	Compress Design	Compressing Design File	Compress Design	
Microstation	File	End Recording Macro	Macro Recording Stopped	MACRO RECORD STOP	
Microstation	File	Export DWG	Saving As DWG	Export DWG	
Microstation	File	Play My Recording	Set Feature	MACRO PLAY SETFEATURE	
Microstation	Navigation	Choose Element	K	CHOOSE ELEMENT	
Microstation	Navigation	Click Data	Datapoint Complete	Buttonaction Data	
Microstation	Navigation	Click Reset	Reset Complete	Buttonaction Reset	
Microstation	Navigation	Fit View	K	Fit View Extended	
Microstation	Navigation	Move Down	K	Move Up 0.1;Xy=-1000,-1000	

**Application:**  
☒ MicroStation  
☐ OpenRoadsDesigner

**Category:**  
File

**Command:**  
Play My Recording

**Response:**  
Set Feature


AddUpdate

ResetDelete

**Key-In:**  
MACRO PLAY SETFEATURE

# Step6: How to Add / Edit Voice Commands

1. Find out a Microstation Key-In for commands you want to add in the Command List
2. Open Command Help Window
3. At the bottom, there are textboxes to enter : Category, Voice Command, Response & Key In
4. After filling all textboxes, click on button: ADD
5. You can Update existing commands or Delete unwanted commands
6. Please take back up of :  
..\\MSVoiceCommands\\MicroStation.vc and  
..\\MSVoiceCommands\\OpenRoadsDesigner.vc  
before changing commands, so that you can roll back changes
7. Please make sure that while you add commands externally(by editing .vc file) the Help form should not be opened. Else your externally modified file will be replaced by commands currently read in to Voice Commands console.
8. In this case, You need to speak : **Set Scale 8000** & Microstation Key-In would be triggered automatically

> Windows (C:) > Users >  > AppData > Local > Bentley > MSVoiceCommands

Name	Date modified	Type
 MicroStation	8/27/2020 6:33 PM	VC File
 OpenRoadsDesigner	8/27/2020 6:33 PM	VC File

Voice Commands Help v1.0

Application	Category	Command	Response
Microstation	DrawingProduction	Edit Text	k
Microstation	DrawingProduction	Hide Model Annotation	k
Microstation	DrawingProduction	Measure Angle	Choose Elements
Microstation	DrawingProduction	Measure Distance	Set Parameters
Microstation	DrawingProduction	Place Label	Set Parameters
Microstation	DrawingProduction	Place Table	Set Parameters
Microstation	DrawingProduction	Place Text	k
Microstation	DrawingProduction	Place Text Along	k
Microstation	DrawingProduction	Set Scale Five Hundred	Scale Updated To 500
Microstation	DrawingProduction	Set Scale Five Thousand	Scale Updated To 5000
Microstation	DrawingProduction	Set Scale Ten Thousand	Scale Updated To 10000
Microstation	DrawingProduction	Set Scale Two Thousand	Scale Updated To 2000
Microstation	DrawingProduction	Show Model Annotation	Showing Model Annotation
Microstation	File	Attach Reference	Attaching Reference
Microstation	File	Begin Recording Macro	Macro Recording Started
Microstation	File	Compress Design	Compressing Design File
Microstation	File	End Recording Macro	Macro Recording Stopped
Microstation	File	Export DWG	Saving As DWG
Microstation	Navigation	Choose Element	K
Microstation	Navigation	Click Data	Datapoint Complete
Microstation	Navigation	Click Reset	Reset Complete
Microstation	Navigation	Fit View	K
Microstation	Navigation	Move Down	K

Application: ☒ MicroStation ☐ OpenRoadsDesigner

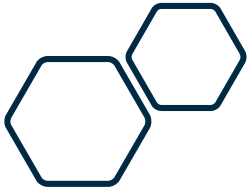
Category:

Command:

Response:

Key-In:

Add Update Reset Delete



# Share Your Feedback with Developers