Q: How much air domain is required for the electric analysis?

A: The body of air should extend up to where the magnitude of the electric field is sufficiently small.
To create the air domain automatically, select [Create ambient air automatically] for the automatic ambient air creation on the [Mesh] tab in the [Analysis Condition Setting] dialog box.
(By default, selected)

Please refer to the next slide.

Additional Information

- The body of air should extend up to where the magnitude of the electric field is sufficiently small.

- To create the air domain automatically, select [Create ambient air automatically] for the automatic ambient air creation on the [Mesh] tab in the [Analysis Condition Setting] dialog box. (By default, selected)

- If [Static Analysis (Resistance)] is selected for the analysis type, [Create ambient air automatically] is automatically deselected because of no electric field leakage into the air domain.

- By default, the ambient air scale is properly set such that the model length is multiplied by 3.0. If the open boundary is set to the external boundary condition, the multiplying value can be less than 3.0 with the accuracy of calculation maintained, which will lead to a smaller air domain.

Analysis Condition Setting

	Mesh
Solver	
Electric Analysis	
Mesh	
External Magne...	
Open Boundary	
Harmonic Analy...	
High-Level Setti...	
Results Import	
Notes	

Meshing Setup

Mesh Size

☑ Set the general mesh size automatically.

General Mesh Size 0.5 [mm]

Element Type

◉ Tetrahedral Free Mesh
○ Tetrahedral-Free/Sweep Mesh
○ Hexahedral-Free/Sweep Mesh
  ☐ Layer Structure
☐ Equilateral triangle or close in shape on the body surface

Element Order

○ 1st-Order Element (Time Prioritized)
◉ 2nd-Order Element (Accuracy Prioritized)

Meshing Control [Setting]

Adaptive Meshing

☐ Apply Adaptive Meshing [Setting]

Automatic Ambient Air Creation

☑ Create ambient air automatically
Ambient Air Scale Model Length x 3.0
☑ Set mesh size automatically
Mesh Size of Ambient Air 6.0 [mm]