# Solution for Error of tree survey

## (KX-UDS/UDT series)

No. 41-006

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Ver.1.0

Panasonic Corporation

# Abstract about this document

This document describes about trouble shooting of tree survey.

# Revision history

| Date | Version | Revision | Firmware version |
|------|---------|----------|------------------|
| Aug 21, 2012 | Ver. 1.0 | Initial Release | All versions |
| July 3, 2017 | Ver. 1.0 | Add  page 3<br>Add page 6<br>Add page 17<br>Modify page 16 | All versions |

# The difference between Web user interface and CS Maintenance Tool

| Function | | Web user interface | CS Maintenance Tool |
|---|---|---|---|
| Multi language support | | When Login by ADMIN authority : US English only<br><br>When login by USER authority*1 : 8 languages<br><br>*1: for limited screens | When Login by ADMIN authority : US English (Default)<br><br>+ additional languages available (XML)<br><br>*Additional language xml files may be found at the Panasonic's website. |
| CS registration | | Yes | No |
| Tree survey | Maximum number of CS | 9 | 32 |
| | Layer of tree | 8 layers | 8 layers |
| | Result display | Available | Available |
| | Tree image display<br>*Color display only immediately after Tree survey | By text<br>No information of neighboring CS | By illustration<br>Neighboring CS information by color |
| | Reflect results to each CS | Yes | Yes |
| | Manual tree structuring | Yes | Yes |
| CS status display while in actual operation | Result list | Yes | Yes |
| | Tree image display | By text<br>Monitor status (RSSI/Error rate/ LAN connection) in color | By illustration<br>Monitor status (RSSI/Error rate/LAN connection) in color |
| Logging function | Error detection log | Yes | Yes |
| | Communication interrupt log | No | Yes |

# Notices

- **We strongly recommend conducting the Site Survey** before conducting Tree Survey.

- You can use **CS monitor** function for checking LAN connection.
    - ➡ See page 5

- You must **click "Cancel" button** to restart Tree Survey when you fail Tree Survey.  (SIP-CSs reboot automatically)
    - ➡ See page 17

# The condition to be able to start tree survey

You can check the LAN connection and air sync with using CS monitor function.



It does not matter that RSSI and Error Rate are not shown to start tree survey.

When all status shows OK, you can start tree survey.

At this stage (Before completing Tree Survey),
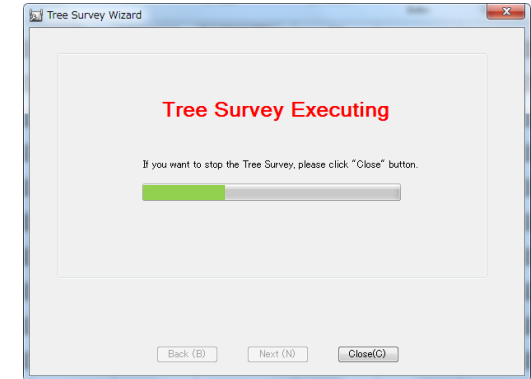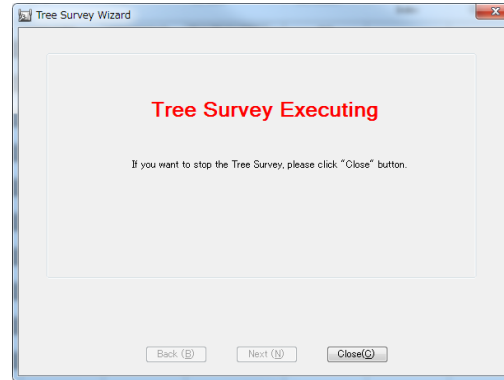only status of "Wired LAN" makes sense.

Don't care status of RSSI/Error rate before completing Tree Survey,
because Primary CS is not decided completely at this stage.

# It might to wait several minutes before executing tree survey

There is a case, it takes several minutes before executing tree survey after pushing [Start] button.
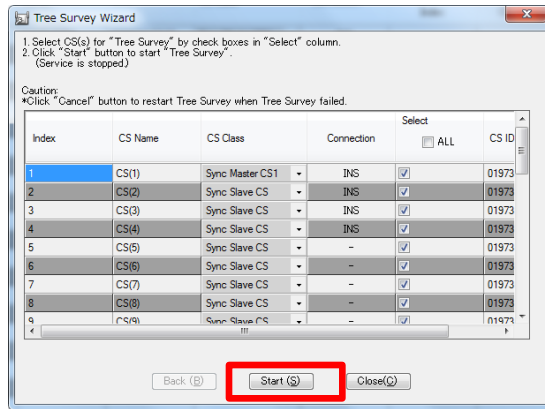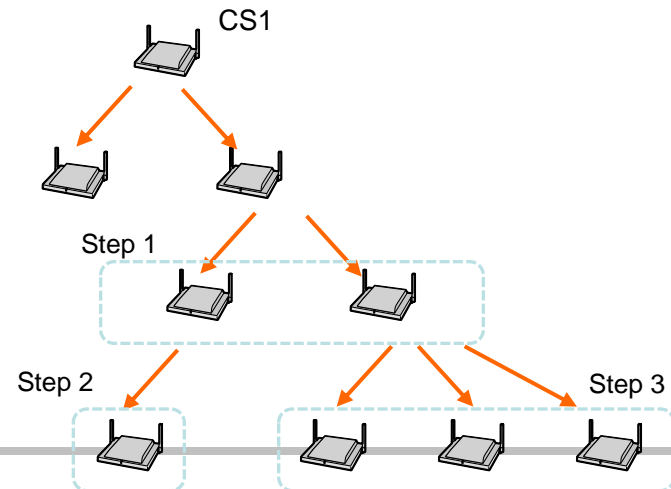


[Start]

Show this dialogue several minutes.

It depends on the depth of the tree, because Air sync procedure is done step by step.
**It might take from 1 to 3 minutes to synchronize one tree.**
And this time depends on the strength between CSs to be synchronize.

On the example of right figure, Air sync should be taken 3 times. So, the sum of Air sync time is about 9 minutes as maximum.

# CS Maintenance Tool

If there are some errors,
Error Messages will be displayed as shown below.

example
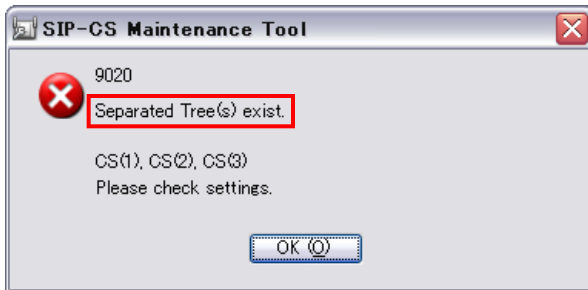


**or**



Consult the Error Message Table in next few pages,
and try what is described in solution column .

You must resolve all errors for completing a tree survey.

Note:
 At CS Maintenance Tool,
 Master CS is called "Sync Master CS1",
 2nd Master CS is called "Sync Master CS2"

# Tree Survey -By CS Maintenance Tool-  Error Message Table

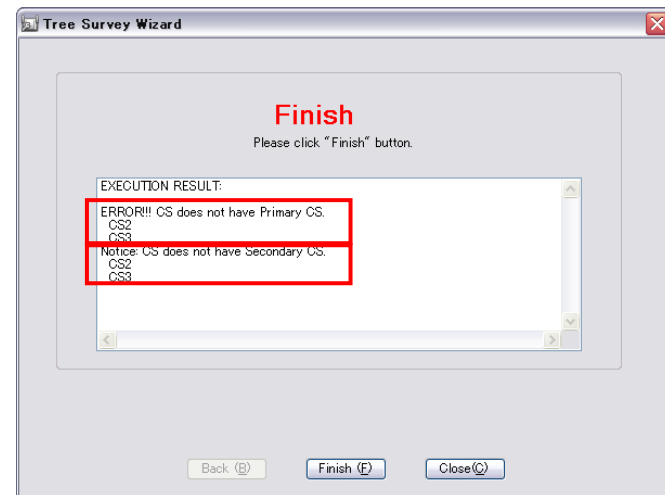| Screen | Phase | Error/ Notice | Code | Message | Explanation | Solution |
|---|---|---|---|---|---|---|
| Login | | Error | 9004 | Connection error<br><br>Please confirm the network connecting the CS(s) and PC | The causes are followings.<br><br>- CS is powered off.<br>- Network trouble between PC and CS<br>- IP address is invalid | Please confirm the network connecting Super Master and PC.<br>Check IP address of Super Master. |
| | | Error | 9005 | Login error<br><br>Check User name and Password. | Login failed. | Check User name and Password. |
| Air Sync | Start | Error | 9007 | Sync Master CS1 is not selected.<br><br>Check whether Sync Master CS1 is selected. | Sync Master CS1 is not selected when starting Tree Survey. | Confirm a check box whether Sync Master CS1 is selected. |
| | Executing | Error | 9006 | Connection error.<br><br>Please confirm the network connecting the CS(s) and PC | The causes are followings.<br><br>- CS is powered off.<br>- Network trouble between PC and CS<br>- IP address is invalid | Please confirm the network connecting Super Master and PC.<br>Check IP address of Super Master. |
| | | Error | 9009 | Monitoring error because air synchronization has not been established.<br><br>Please move the CS(s) closer to Primary CS according to site planning. | The CS can not synchronize with other CS by following cause.<br><br>- CS could not find an adjacency CS. | Move the CS(s) closer to adjacency CS. |

# Tree Survey -By CS Maintenance Tool- Error Message Table

| Screen | Phase | Error/ Notice | Code | Message | Explanation | Solution |
|---|---|---|---|---|---|---|
| Air Sync | CS Monitoring | Error | 9009 | Monitoring error because air synchronization has not been established.<br><br>Please move the CS(s) closer to Primary CS according to site planning. | The CS can not synchronize with other CS by following cause.<br><br>- There are too many CSs around the CS.<br>- Interference occurs around the CS. | Move away each CS with proper distance.<br><br>Remove interference around the CS(s). |
| | Tree Survey Result | Error | - | Notice: CS does have Secondary CS.<br><br>Please move the CS(s) closer to Secondary CS according to site planning in this case. | One or more SIP-CSs could not have a Slave CS assigned for reasons such as avoiding the creation of a loop. However, this is not a problem. | This is not a problem.<br>See page 16 for detail. |
| | | Error | - | ERROR!!! CS does not have Primary CS.<br><br>Please move the CS(s) closer to Primary CS(s) according to site planning. | A SIP-CS has radio signal trouble. | Please check whether a radio signal obstacle, such as a metal shelf, a door etc.., exist near the SIP-CS.<br>And conduct Tree Survey again, after clicking [Cancel]. |
| | | Error | - | Error!!! Parameter Error. | A SIP-CS has radio signal trouble.<br>- Error rate is high<br>- Invalid data is received. | Interference may occur. Please check wireless environment. |

# Tree Survey -By CS Maintenance Tool-  Error Message Table

| Screen | Phase | Error/Notice | Code | Message | Explanation | Solution |
|---|---|---|---|---|---|---|
| Air Sync | Tree Survey Result | **Error** | - | ERROR!!! Unknown error code. | Tree Survey failed for some reason. | Conduct the Tree Survey again |
| | | **Error** | - | Result contains more than 9 levels. | Level is over 9. So user can not apply. | Please refer to Tree Structure and relocate CS(s) for reducing the level. |
| | | **Error** | 9020 | Separated Tree(s) exist. | Some isolated trees has been created by Tree Survey. | Accidental situation might have occurred, like a door was closed near some CSs. Please check location and environment of CSs. |
| | Apply | **Notice** | 9033 | Sync Master CS2 does not exist. | Sync Master CS2 is not set. | Set Sync Master CS2 manually if needed. |
| | | **Notice / Error** | 9022 | CS does not have Secondary CS.<br><br>Please check settings. | 1) Secondary CS is not set. (Notice)<br>2) CS number set as Secondary CS does not exist in the group. (Error) | 1) This is not a problem.<br>   See page 16 for detail.<br>2) Set correct CS number of Secondary CS. |
| | | **Notice** | - | CS does not have Primary CS.<br><br>Please check settings. | 1) Primary CS is not set in GUI.<br>2) CS number set as Primary does not exist in the group. | 1) Set Primary CS.<br>2) Set correct CS number of Primary CS. |

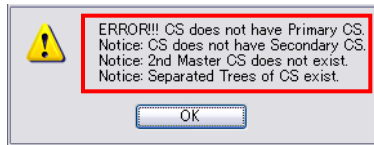# Tree Survey -By CS Maintenance Tool-  Error Message Table

| Screen | Phase | Error/Notice | Code | Message | Explanation | Solution |
|--------|-------|--------------|------|---------|-------------|----------|
| Air Sync | Apply | Error | 9120 | Primary index is same as Secondary index.<br><br>Please check settings. | Primary CS is equal to Secondary CS. | Please check Settings. |
| | | Error | 9121 | Primary or Secondary index is same as own index.<br><br>Please check settings. | Primary CS or Secondary CS is equal to own CS. | Please check Settings. |
| | | Notice | 9300 | System is Reset. | Warning to apply or cancel. | - |
| | | Notice | 9302 | Sync Master CS2 already exists. | When user selected CSs before tree survey. Sync Master CS2 already exist in CS list except Tree Survey result. | Sync Master CS2 must be one or less.<br>Please change the CS class manually. |
| | | Notice | - | !!! Error !!!<br>It is not allowed to automatically change "Sync Master CS1".<br>Please swap current "Sync Master CS1" for new one by hand.<br><br>Current : "CS Name"<br>New : "CS Name" | Sync Master CS1 is manually changed when apply button is clicked.<br>(Sync Master CS1 can't change by GUI.) | Please swap current "Sync Master CS1" for new one by hand if you want to change Sync Master CS1. |

# Tree Survey -By CS Maintenance Tool- Error Message Table

| Screen | Phase | Error/ Notice | Code | Message | Explanation | Solution |
|---|---|---|---|---|---|---|
| CS Status Monitor | | Error | 9020 | Separated Tree(s) exist. | Some isolated trees has been created when receiving monitor date. | Accidental situation might have occurred, like a door was closed near some CSs. |
| Maintenance | Import language file | Error | 9027 | Failed (Invalid Path) | folder not found. (Invalid path) | Check file path. |
| | | Error | 9028 | Failed (Invalid File name) | non-exist file | Check file name |
| | | Error | 9029 | Failed (Invalid Language file format)<br><br>Check language file format. | Invalid or corrupted language file. | Check language file format. |
| | | Error | 9030 | Failed (Import) | Failed to import language file due to cause other than the above. | Check language file. |
| Common | | Error | 9101 | Failed (CS error: "error code") | Error is returned from CS after sending request of interface between CS Maintenance Tool and CS | Check CS hardware status by LED. |

# CS WEB UI

If there are some errors,
Error Messages will be displayed as shown below.



**or**

**or**

Consult the Error Message Table in next few pages,
and try what is described in solution column .

You must resolve all errors for completing a tree survey.

Please use IE as web browser.
Other browsers may not display error messages.

# Tree Survey -By WEB UI- Error Message Table

| Phase | Error/ Notice | Message | Explanation | Solution |
|---|---|---|---|---|
| Start tree Survey | Error | CS Number Error | 1) There are no SIP-CSs (or only one SIP-CS) in the Air Sync Group. 2) There are 10 or more SIP-CSs. | 1) Before conducting the Tree Survey, please register SIP-CSs. 2) When there are 10 or more SIP-CSs, please use CS Maintenance Tool for Tree Survey. |
| | Error | Tree Survey Timeout. | 1) Slave CS may have network trouble. 2) Slave CS cannot receive radio signal from another Air Sync Group CS. | 1) Please check the SIP-CS's power/network condition. 2) Please check whether a radio signal obstacle, such as a metal shelf, a door, etc.., exists near the SIP-CS. |
| | Error | ERROR!!! CS does not have Primary CS. | A SIP-CS has radio signal trouble. | Please check whether a radio signal obstacle, such as a metal shelf, a door, etc.., exists near the SIP-CS. |
| | Error | ERROR!!! Parameter error | All monitoring data are not valid. - Error rate is high - Invalid data is received. | Interference may occur. Please check wireless environment. |
| | Error | ERROR!!! Unknown error code. | Tree Survey failed for some reason. | Conduct the Tree Survey again. |
| | Notice | Notice: CS does not have Secondary CS. | One or more SIP-CSs could not have a Slave CS assigned for reasons such as avoiding the creation of a loop. However, this is not a problem. | This is not a problem. See page 16 for detail. |

# Tree Survey -By WEB UI- Error Message Table

| Phase | Error/ Notice | Message | Explanation | Solution |
|---|---|---|---|---|
| Apply / Tree Image | Error | ERROR!!! Master CS does not exist. | Master CS does not exist. | Before conducting the Tree Survey, please register SIP-CSs. |
| | Error | ERROR!!! Primary index == Secondary index. | Primary CS is equal to Secondary CS. | Please check settings. |
| | Error | ERROR!!! Primary / Secondary index == Own index. | Primary CS or Secondary CS is equal to own CS. | Please check settings. |
| | Error | ERROR!!! Two or more 2nd Master CS exists. | Two or more 2nd Master CS exists. | 2nd Master must be one or less. |
| | Error | ERROR!!! CS does not have Primary CS. | 1) Primary CS is not set in GUI. 2) CS number set as Primary CS does not exist in the group. | 1) Set Primary CS manually. 2) Set correct CS number of Primary CS. |
| | Error | ERROR!!! CS does not have Secondary CS. | CS number set as Secondary CS does not exist in the group. | Set correct CS number of Secondary CS. |
| | Error | ERROR!!! CS Level Error. | CS level must be 8 or less. | Please set Primary index / Secondary index to meet the condition. Rearrange the Master CS to the center of entire coverage area. |
| | Notice | Notice: Separated Tree of CS exist. | Some isolated trees has been created by Tree Survey. | Accidental situation might have occurred, like a door was closed near some CSs. Please check location and environment of CSs. |
| | Notice | Notice: 2nd Master CS does not exist. | 2nd Master CS is not set. | Set 2nd Master CS manually if needed. |
| | Notice | Notice: CS does not have Secondary CS. | Secondary CS is not set. | This is not a problem. See page 16 for detail |

From the viewpoint of redundancy,
It is better that the CS has secondary CS.
However, in the case like the example 2,
It is acceptable that the CS does not have secondary CS.
So, "CS does not have Secondary CS." is not a problem.

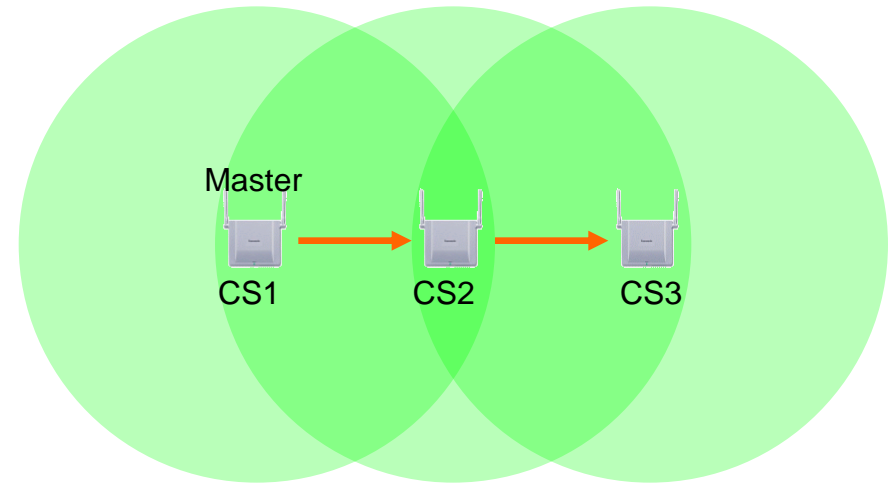→ Primary clock signal
┈┈▶ Secondary clock signal

## Example 1
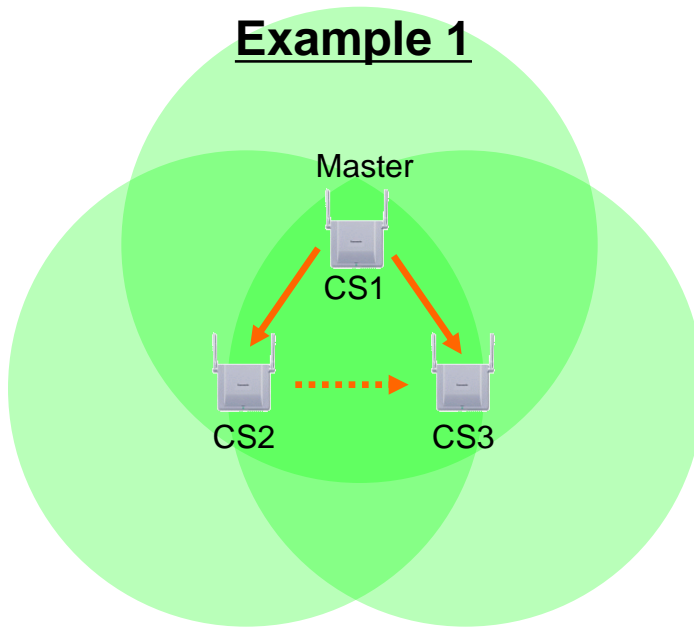


| index | CS class | Primary CS | Secondary CS |
|-------|----------|------------|--------------|
| 1 | Master | | |
| 2 | Slave | 1 | |
| 3 | Slave | 1 | 2 |

In this case, CS3 can receive not only CS1's clock signal but also CS2's clock signal.
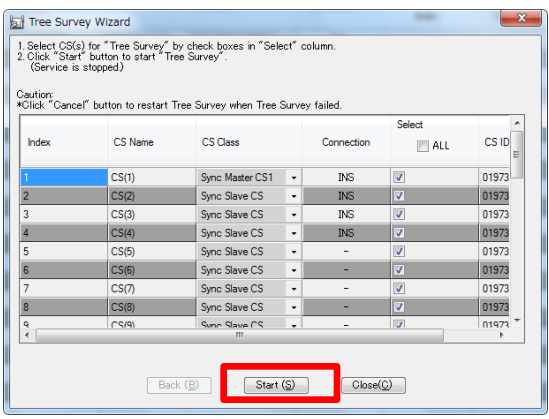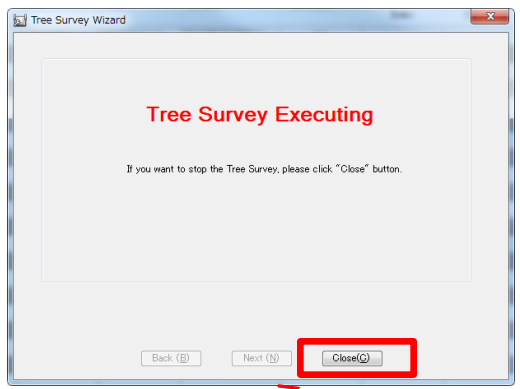It means that Slave CS have the secondary CS.

## Example 2



| index | CS class | Primary CS | Secondary CS |
|-------|----------|------------|--------------|
| 1 | Master | | |
| 2 | Slave | 1 | |
| 3 | Slave | 2 | |

In this case, CS3 can't receive any clock signal except CS2's clock signal.
It means that CS3 have the secondary CS.

[Start]
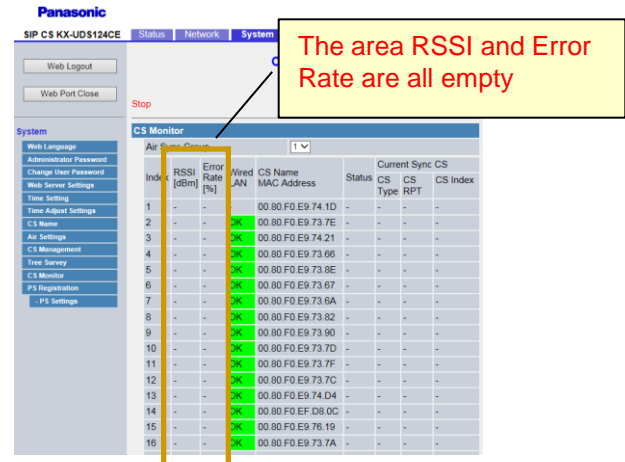

[Close]



The area RSSI and Error Rate are all empty
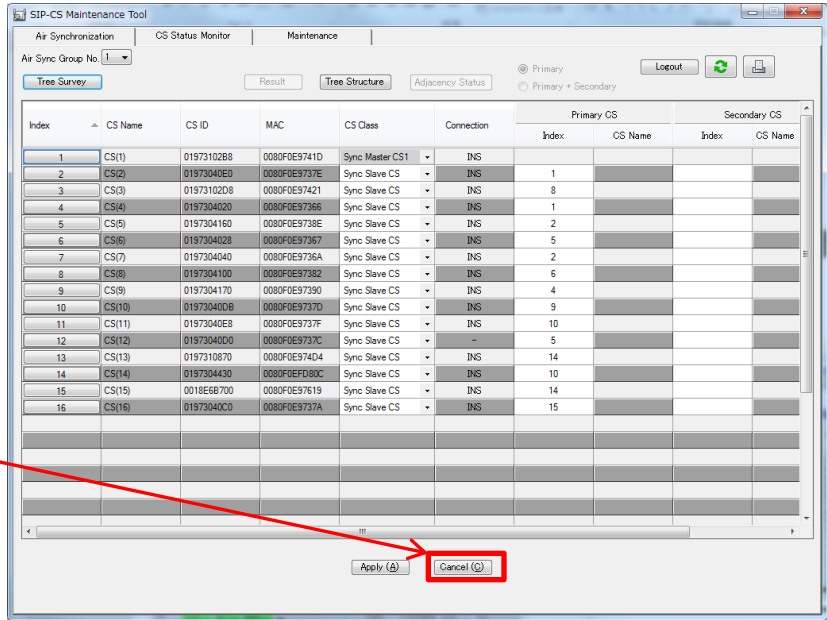
When the CS monitor shows like this, it means halfway status

When you just push [Close] button of Executing window, tree survey status remains activated in all CS.
You can identify such halfway status by seeing CS monitor as upper right figure.

In order to go back to normal status, you have to reboot all the CS by pushing [Cancel] button.


[Cancel]