OMRON

NS Project Merge Tool

Operation Manual

Contents

OMRON

Section 1 Overview

1-1 What is NS Project Merge Tool ?

NS Project Merge Tool unifies two projects created with NS Designer. It outputs the unified project data by specifying base project which can be base of the unified project and merge project which can be added or overwritten to the base project.

Project is created by combining the base project and merge project.
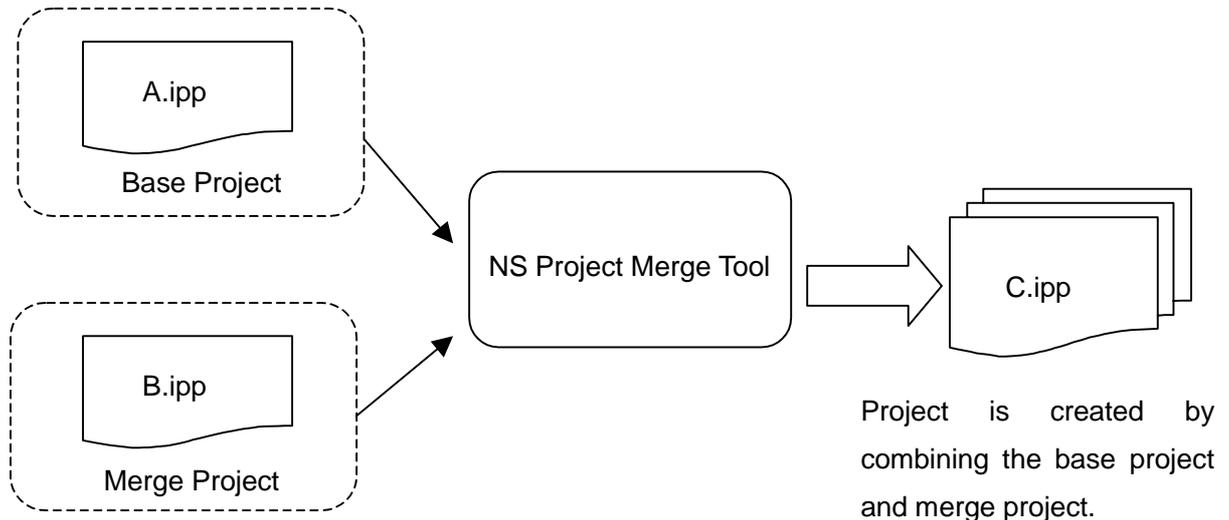
To merge base project and merge project, settings such as screen numbers, Data Block numbers, and Alarm/Event addresses should not be overlapped. Merge will be performed on assumption that settings of base project and merge project are not overlapped. If projects including same settings for both are attempted to merge, an error message appears and merge cannot be performed(when Add type is selected). Refer to 4-2-1 **Merge Conditions** for details on settings that should not be overlapped when merging projects.

1-2 NS-Designer System Version

NS Project Merge Tool Ver.1.0 can merge project data created with NS-Designer Ver.2.X only. To use project data created with NS-Designer Ver1.X as base project or merge project, convert the data to Ver.2.X with NS-Designer Ver2.X beforehand and perform merge.

1-3 NS Project Merge Tool Features

- It is possible to unify project files just by specifying file names of base project and merge project.
- There are two types for merging projects. **Add type** adds information of the merge project to the base project. **Overwrite type** overwrites information of the merge project to the base project.
- It is possible to use combining a project data created with NS-Designer beforehand and a project data auto generated by Face Plate Auto-Builder for NS.

OMRON

1-4 System Requirements

The following are required to use NS Project Merge Tool.

1-4-1 Hardware

IBM PC/AT or compatible capable of running the required OS.

Recommended Processor: Intel Celeron 400 MHz or better

Recommended Memory:64 Mbytes or more

Available Disk Space:200 Mbytes or more

Please prepare sufficient memory capacity beforehand following by the recommended value.

1-4-2 Operating System

Microsoft Windows95(OSR2 or higher),Microsoft Windows98/Me/NT4.0(Service Pack 3 or higher), or Microsoft Windows2000/XP.

Note: Microsoft Windows 95 earlier than Microsoft Windows95 OSR2 is not supported.

1-5 Merging project data output by Face Plate Auto-Builder for NS

This section explains procedure for merging an existing project created with NS-Designer beforehand and a project output by Face Plate Auto-Builder for NS.

● Before Merging Projects

To merge two projects , settings for both projects should not be overlapped. Thus settings for an existing project must be checked beforehand and then output the project data using Face Plate Auto-Builder for NS not to overlap settings with it.

The following table shows an example of settings for existing project data (Source.ipp)

E.g. Settings for the existing project data

Item	Settings
Screen Number	Screen No. 0 to 250 used.
Unit & Scale Setting	Number 12 to 20 used.
Data Log group number	Group number 1 to 5 used.
Confirmation Message No.	Number 10 to 20 used.
Alarm/Event Address	300 points registered between CIO 100.00 to 150.00.
Communication Method	Serial port A with 1:N NT Links

Output project data using Face Plate Auto-Builder for NS not to overlap with settings earlier mentioned. For example, output project data with settings as shown in the table below (FacePlate.ipp).

E.g. Settings for the project data to be output by Face Plate Auto-Builder for NS

Item	Settings
Top of the Screen Number used	Screen Number 300
Top of the Unit & Scale Setting used	Number 30
Top of the Data Log group number used	Group number 6
Top of the Confirmation Message No. used	Number 21
Alarm/Event Address	Not used in the Face Plate Auto-Builder for NS
Communication Method	Serial A

It is necessary to output a project data including settings not to overlap with an existing project before merging projects with NS Project Merge Tool.

Reference

Refer to the *SYSMAC WS02-NSFC1-E Face Plate Auto Builder for NS Ver1.1 OPERATION MANUAL (W418-E1-01)* for details on using Face Plate Auto-Builder for NS.

● Operation by Add type

To perform regular merge operation, merge projects by *Add* type. The following must be set .
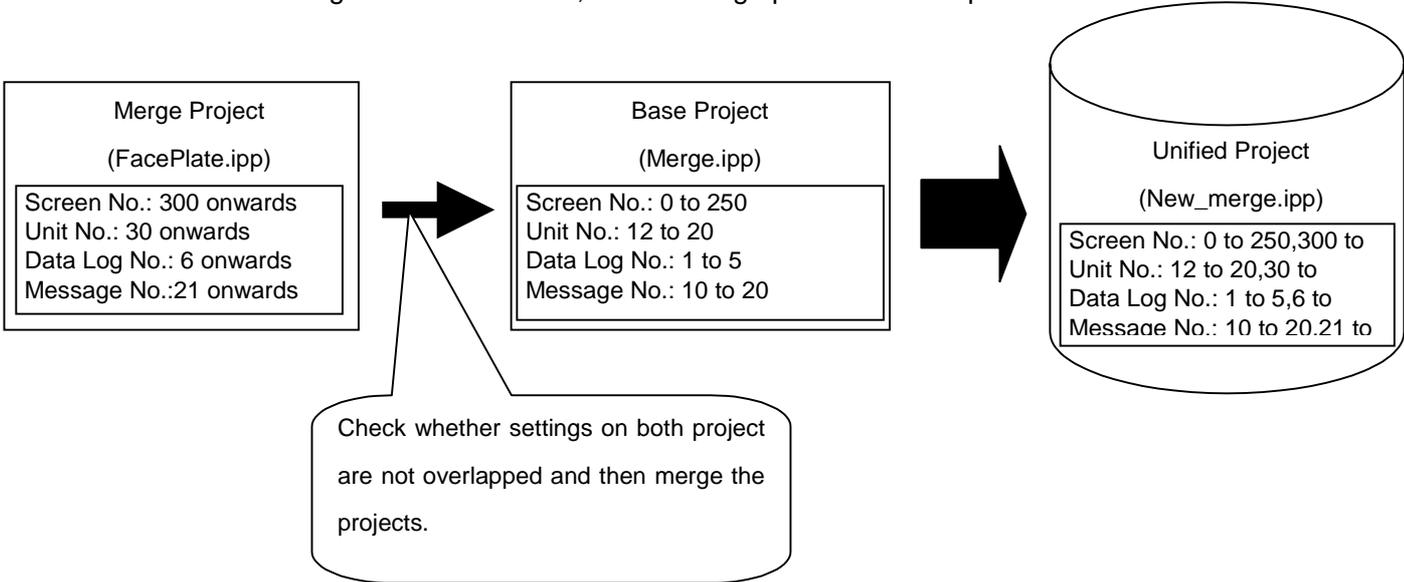
Base project: Source.ipp

Merge Project: FacePlate.ipp

OMRON

Unified Project: Merge.ipp

Merge Type: Add

If those settings have been made, the following operation will be performed.

Merge Project		Base Project		Unified Project
(FacePlate.ipp)		(Merge.ipp)		(New_merge.ipp)
Screen No.: 300 onwards Unit No.: 30 onwards Data Log No.: 6 onwards Message No.:21 onwards	→	Screen No.: 0 to 250 Unit No.: 12 to 20 Data Log No.: 1 to 5 Message No.: 10 to 20	→	Screen No.: 0 to 250,300 to Unit No.: 12 to 20,30 to Data Log No.: 1 to 5,6 to Message No.: 10 to 20,21 to

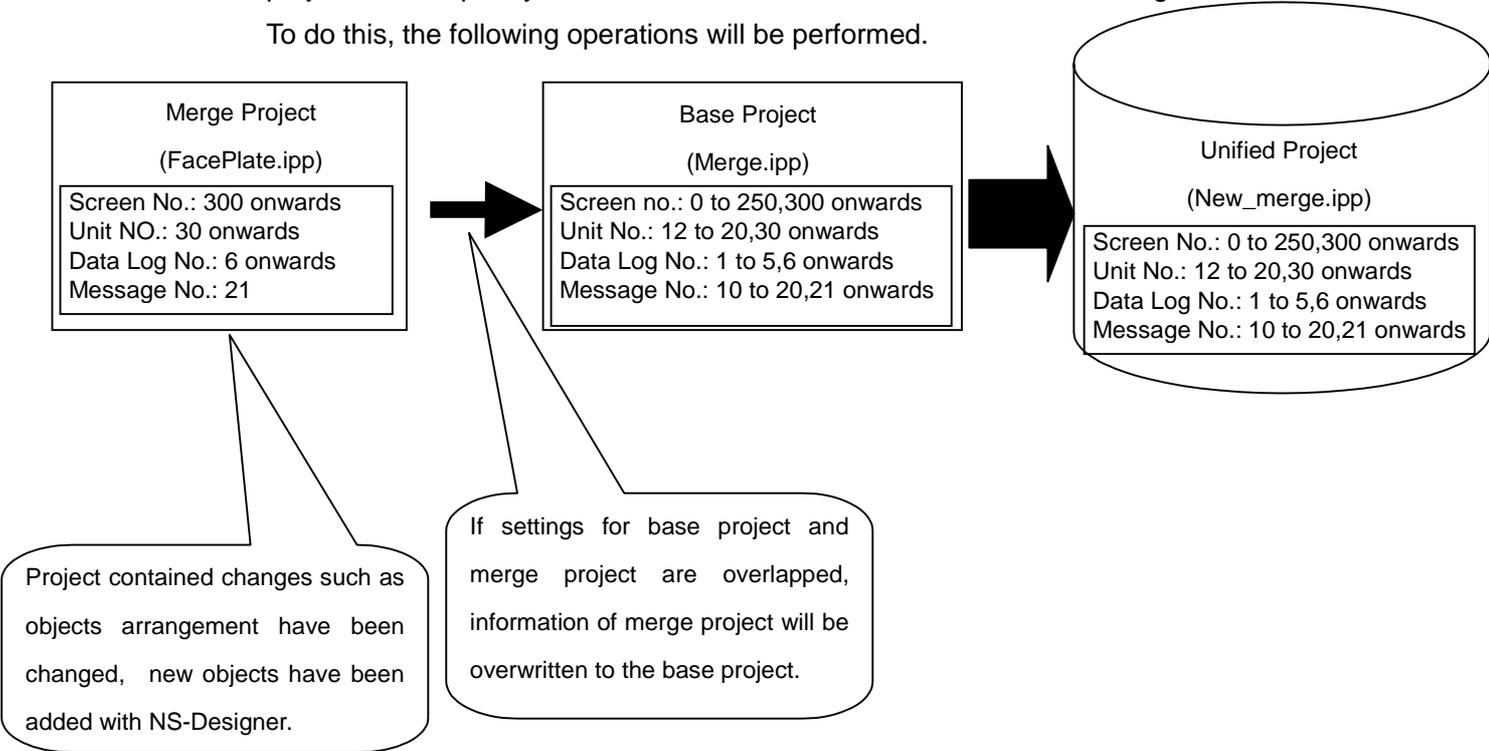Check whether settings on both project are not overlapped and then merge the projects.

Settings on both projects will be reflected to the newly created project (unified project). For communication settings and system settings, however, those on base project will be reflected. Refer to *4-2 Project Merge* for details on conditions and rules.

● Operation by Overwrite type

Select Overwrite type to merge unified project which has been merged once with project data output by Face Plate Auto-Builder and edited with NS-Designer.

To do this, the following operations will be performed.

Merge Project		Base Project		Unified Project
(FacePlate.ipp)		(Merge.ipp)		(New_merge.ipp)
Screen No.: 300 onwards Unit NO.: 30 onwards Data Log No.: 6 onwards Message No.: 21	→	Screen no.: 0 to 250,300 onwards Unit No.: 12 to 20,30 onwards Data Log No.: 1 to 5,6 onwards Message No.: 10 to 20,21 onwards	→	Screen No.: 0 to 250,300 onwards Unit No.: 12 to 20,30 onwards Data Log No.: 1 to 5,6 onwards Message No.: 10 to 20,21 onwards

Project contained changes such as objects arrangement have been changed, new objects have been added with NS-Designer.

If settings for base project and merge project are overlapped, information of merge project will be overwritten to the base project.

If settings for base project and merge project are overlapped, information of merge project will be overwritten to the base project and the new project will be output as unified project when you attempt to merge projects by Overwrite type.
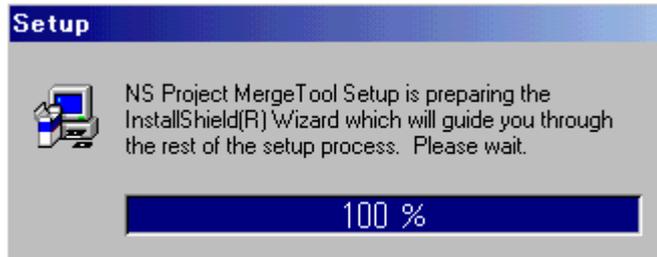

Reference

If settings of screen number, Data Log, Unit & Scale Number are overlapped , they will be overwritten to the base project so please check settings for both projects before merging projects by Overwrite type.
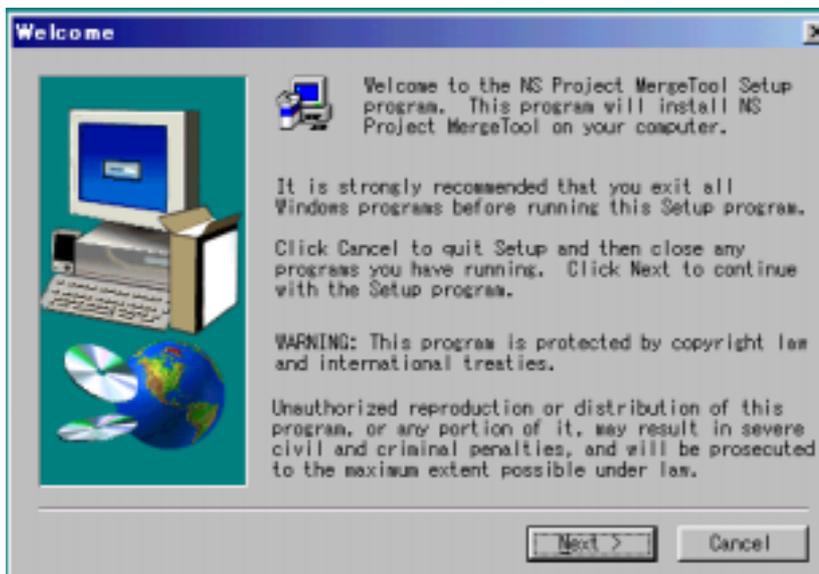
Section 2 Setup

2-1 Installation Procedure

Step 1. Double click on Disk1\Setup.EXE where the SETUP image is located to execute setup
wizard.

Step 2 Install the NS Project Merge Tool by following the instructions in the Setup Wizard.
Click the **Next** button.

Step 3   Specify the directory.
Default installation destination is C:\Program Files \OMRON/NS_MERGE. Click
Browse button and specify directory to change the destination.
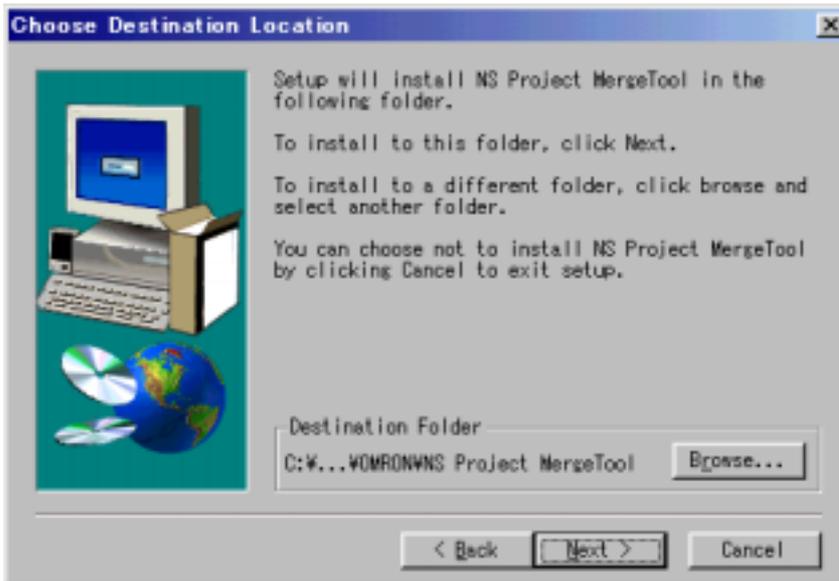
Step 4 . Specify Program Folder. OMRON\NS Project Merge Tool is selected as default.
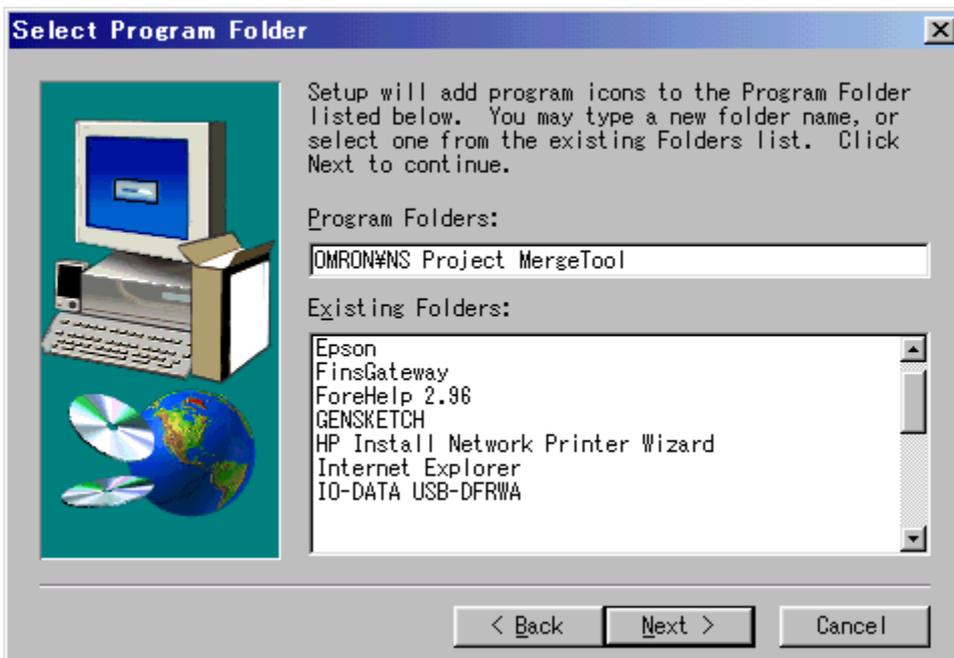
Step 5. When installation has been completed, the Finished Window will be displayed. Select whether or not to restart the computer immediately, and click the **Finish** Button to complete the installation.

Setup Complete

Setup has finished copying files to your computer.

Before you can use the program, you must restart Windows or your computer.

○ Yes, I want to restart my computer now.

○ No, I will restart my computer later.

Remove any disks from their drives, and then click Finish to complete setup.

< Back   Finish

Step 6. The computer will be restarted.

2-2 Uninstalling

Step 1. Start up **Add/Remove Applications** in the **Control Panel.**

*The screen image depends on Operating System.

Select **NS Project Merge Tool** and click **Add/Remove** button.

Step 2. Click **Yes** button and the program will be uninstalled.
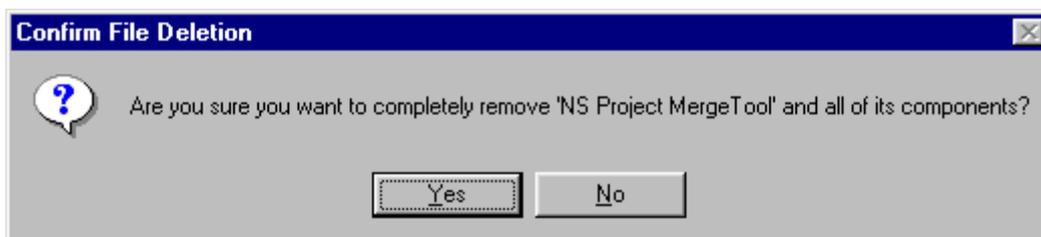
Section 3 Operation Flow

This section explains how to merge projects using NS Project Merge Tool in the flow chart below.

- **Specifying Base Project**

  Specify base project which should be the base on the NS Project Merge Tool. Specify the project file (IPP file) created with NS-Designer as Base Project.

- **Specifying Merge Project**

  Specify the project which should be added or overwritten to the base project. Specify the project file (IPP file) created with NS-Designer as Merge Project.

- **Specifying Output Folder**

  Specify a folder where the merged project data will be output.

- **Specifying the Unified Project Name**

  Specify the project name for newly created project after merging projects. The project name must be no more than 42 alphanumerical characters including extensions(.IPP).

  Select a name using alphanumerics(A to Z, a to z, 0 to9),underscore(_), dollar symbols($) and periods(.).

- **Selecting Merge Type**

  Merge type can be selected from the following types.

     Add type: This type combines two projects unless settings on both projects are overlapped. If any of settings is overlapped, an error message appears and projects cannot be merged.

  Overwrite type: This type overwrites information of merge project to base project if any of settings on both projects is overlapped. Refer to *4-2 Project Merge* for details.

- **Starts Merge**

  Starts project merge. The merged project data will be saved in the output folder. If merge cannot be performed depending on the combination, an error message appears at the start of merge.
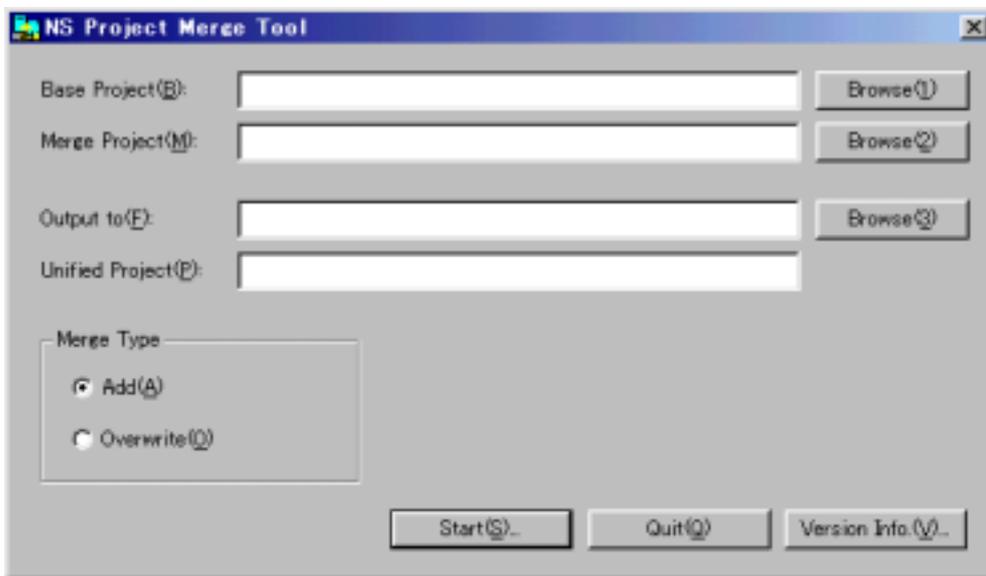
OMRON

Completed
project merge
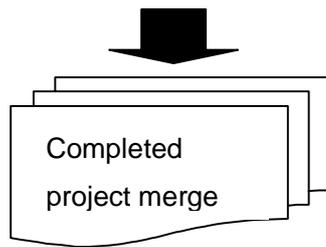
Section 4 Operations

4-1 Screen Images and Basic Operations

To start NS Project Merge Tool, click Windows *Start* Button, and then select *Programs*-*Omron*-*NS Project Merge Tool*-*NS Project Merge Tool*. When starting up the NS Project Merge Tool, the following screen appears.

- Base Project

  Sets the project name with full path which should be the base of unified project. Specify the project file (IPP file) created with NS-Designer for base project. Click **Browse(1)** Button to display Select File Project Dialog Box and the project file can be selected.

- Merge Project

  Sets the project name with full path which should be added or overwritten to the base project. Specify the project file (IPP file) created with NS-Designer for merge project. Click **Browse(2)** Button to display Select File Project Dialog Box and the project file can be selected.

- Output to

  Sets the folder where the merged project data will be output. Click **Browse(3)** Button to display Select File Project Dialog Box and the project file can be selected.

- Unified Project

  Sets project name for the newly created project after merging projects. The project name must be no more than 42 alphanumerical characters including extensions(.IPP).

  Select a name using alphanumerics(A to Z, a to z, 0 to9),underscore(_), dollar symbols($) and periods(.).

- Merge Type

 Merge type can be selected from the following types.

  Add type: This type combines two projects unless settings on both projects are overlapped. If any of settings on both projects is overlapped, an error message appears and projects cannot be merged.

  Overwrite type: This type overwrites information of merge project to the base project if any of settings on both projects are overlapped.

- Start

  Starts merge. The following dialog will be displayed while the merge being performed. An error message shown below appears if specified projects cannot be merged.

<Error Message>
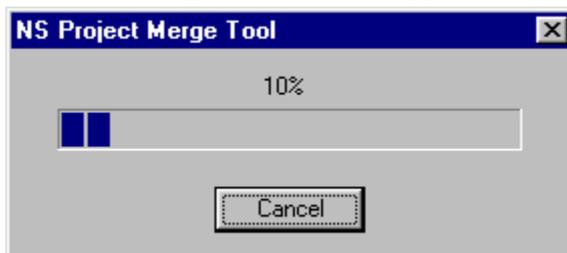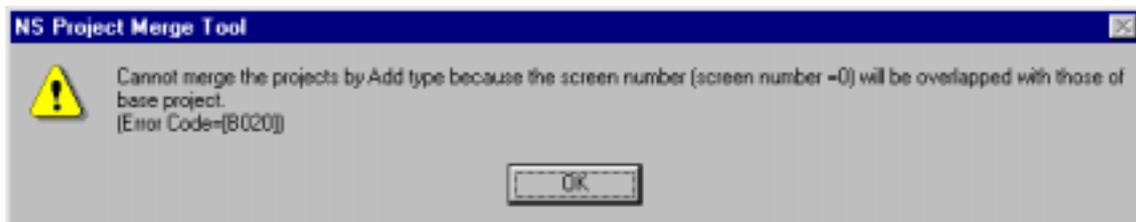
- Version Info.

  Displays Version Information Dialog Box.

- Quit

  Quits NS Project Merge Tool.

4-2 Project Merge

4-2-1 Merge Conditions

When using NS Project Merge Tool, the following conditions must be fulfilled between base project and merge project depending on the merge type. Check whether the following conditions are fulfilled for both projects before performing merge.

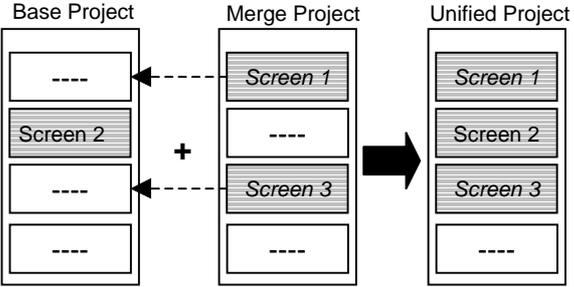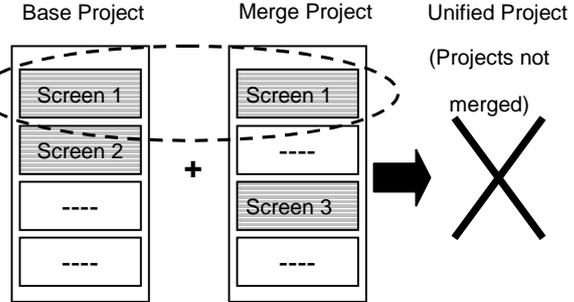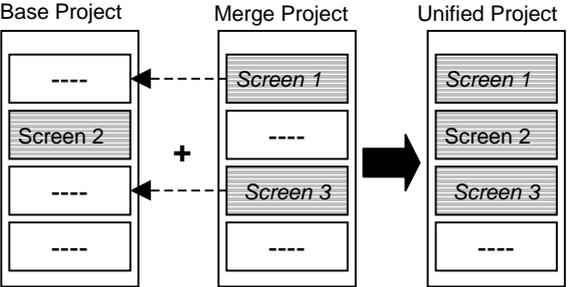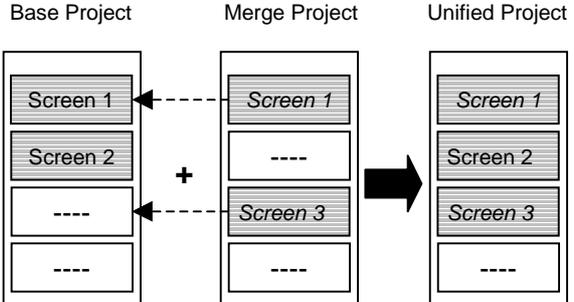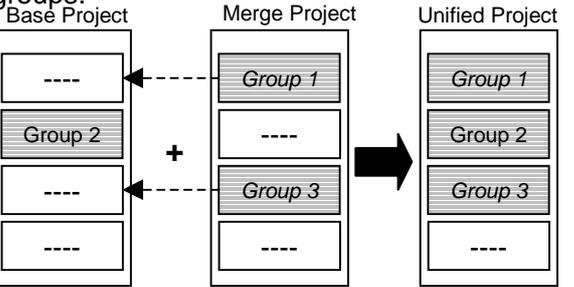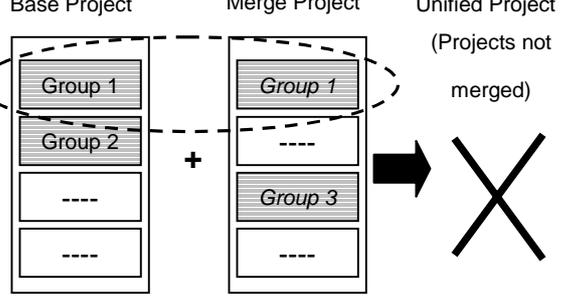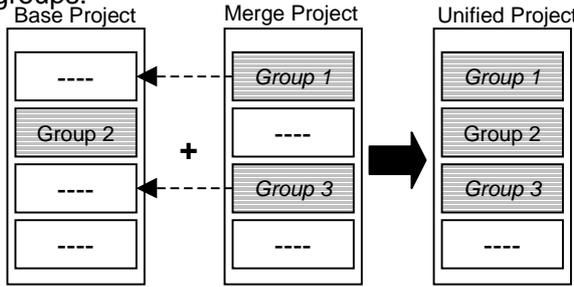|	Condition	Add type	Overwrite type
Project File Version	Project file version must be matched.	◯	◯
Model Type	PT Model must be matched.	◯	◯
Communication settings in the system setting dialog	Settings of Serial port A, B, Ethernet and Controller Link on the **Comm-All** tab of **System Setting** must be matched.	◯	◯
Host Registration	Host No., Host Name, Network Address, Node Address set in merge project are matched with those of base project.	◯	◯
No. of labels	No. of labels set in Switch Label tab of the Project Property must be the same.	◯	◯
Screen Number (Screen, Sheet)	Screen numbers used in both projects are not overlapped.	◯	-
Data Log Group Number	Data Log number used in both projects are not overlapped.	◯	-
Data Log Points	Total of data Log settings in both projects must be no more than the following maximal values. - Always Logging Points:5000 max. - Logging Points Total:51200 max. - Always Log Address Total:50 max.	◯	◯
Alarm/Event Address	Alarm/Event settings for the same address are not set.	◯	-
Alarm/Event Number	Total number of Alarm/Event settings no more than 500.	◯	◯
Data Block Number	Data Block Number set in both projects are not overlapped.	◯	-
Unit & Scale Number	Unit & Scale number set in both projects are not overlapped.	◯	-
Confirmation Message	Confirmation message number set in both projects are not overlapped.	◯	-

◯ :Condition must be fulfilled.   -: No need to be fulfilled

If any of those conditions is not fulfilled, merge can not be performed and an error message appears.
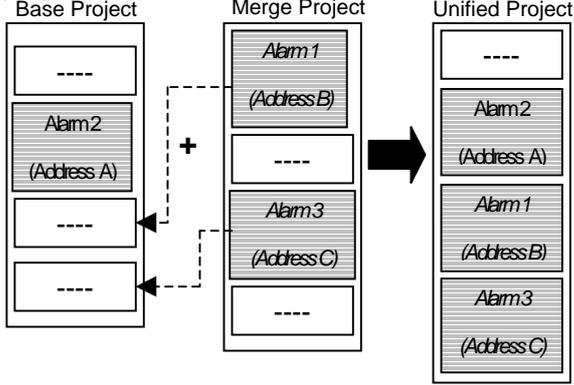

Reference

NS Project Merge Tool Ver.1.0 handles project data created with NS-Designer Ver.2.0 only. To use project data created with NS-Designer Ver1.X as base project or merge project, convert the data to Ver.2.X with NS-Designer Ver2.X beforehand and perform merge.
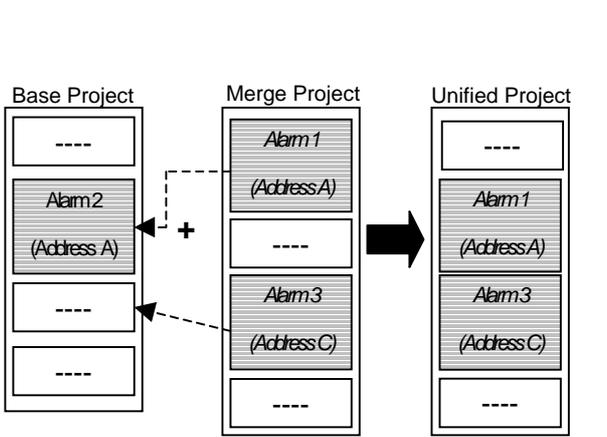

4-2-2 Details of Merge Rules

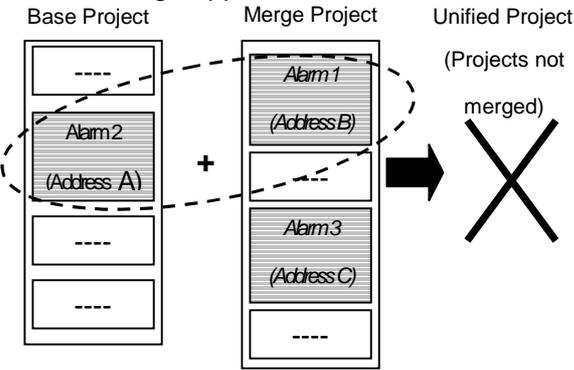| Item	Add Type	Overwrite Type
Normal Screen	Each screen of merge project will be added to base project as the same screen number. Base Project	Merge Project	Unified Project (Screen diagram) If the same screen number exists in both projects, merge cannot be performed and an error message appears. Base Project	Merge Project	Unified Project (Projects not merged) (Screen diagram)	Each screen of merge project will be added to base project as the same screen number. Base Project	Merge Project	Unified Project (Screen diagram) If the same screen number exists in both projects, screen data of merge project will be overwritten to base project. Base Project	Merge Project	Unified Project (Screen diagram)
Sheet	The same rule as normal screen.	
Data Log	Data Log groups set in merge project will be added to base project as the same Data Log groups. Base Project	Merge Project	Unified Project (Group diagram) Merge cannot be performed if the same group number exists in both projects, and an error message appears. Base Project	Merge Project	Unified Project (Projects not merged) (Group diagram)	Data Log groups set in merge project will be added to base project as the same Data Log groups. Base Project	Merge Project	Unified Project (Group diagram) If the same group number exists in both projects, data of merge project will be overwritten to the appropriate position of the base project. Base Project	Merge Project	Unified Project (Group diagram)
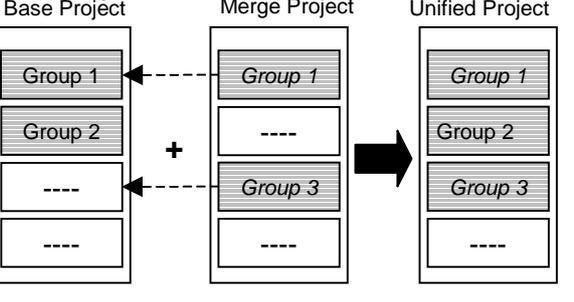
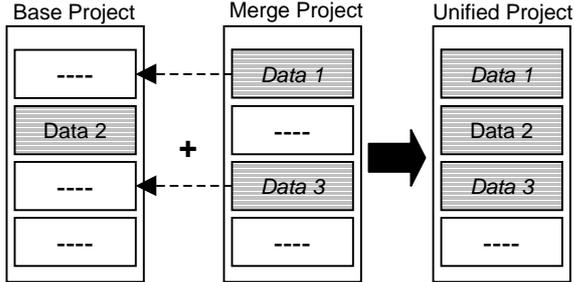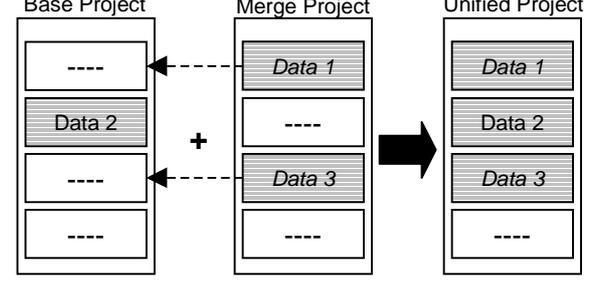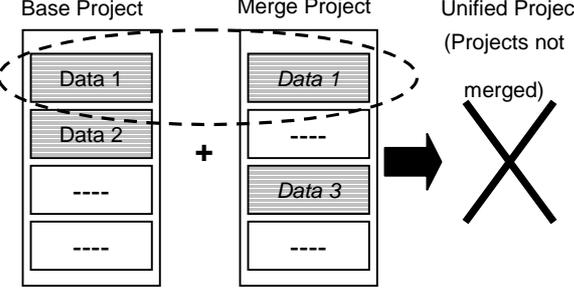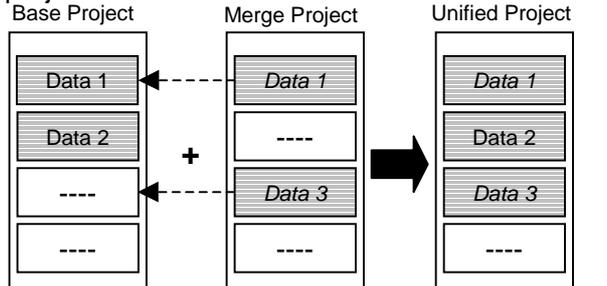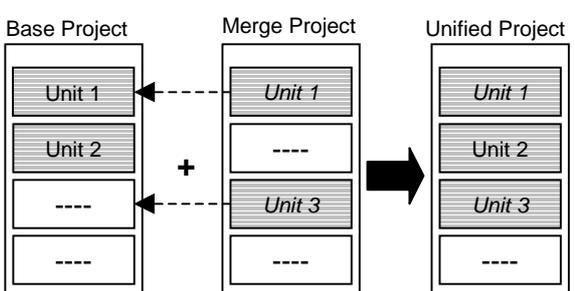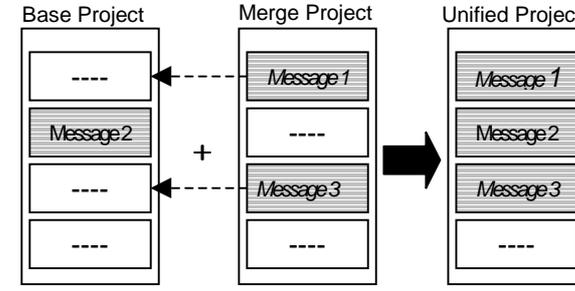|		
Alarm/ Event Setting	Settings of merge project will be added to the end of Alarm/Event Setting area of the base project. If both projects have the same Alarm/Event settings, merge cannot be performed and an error message appears.	If an address set in the Alarm/Event setting of merge project is the same as base project, settings of merge project will be overwritten to the base project. Addresses not overlapped with base project will be added to the end of settings.
Data Block	Data Block settings of merge project will be added to base project as the same Data Block Number. If the same Data Block number exists in both projects, merge cannot be performed and an error message appears.	Data Block settings of merge project will be added to base project as the same Data Block Number. If the same Data Block number exists in both projects, data of merge project will be overwritten to the appropriate location of base project.

OMRON

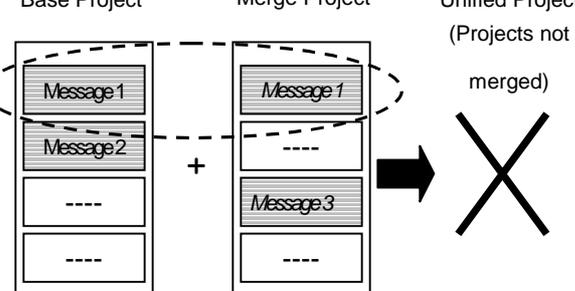| Unit & Scale	Settings of merge project will be added to the same location of base project.	Settings of merge project will be added to the same location of base project.
	If the same Unit & Scale number exists in both projects, merge cannot be performed and an error message appears.	If the same Unit & Scale number exists in both projects, data of merge project will be overwritten to the appropriate location of the base project.
Confirmation message	Confirmation messages will be added to the same location of base project.	Confirmation messages will be added to the same location of base project.
	If the same confirmation message exists in both project, merge cannot be performed and an error message appears.	If the same confirmation message exists in both projects, message set in merge project will be overwritten to the appropriate location of base project.
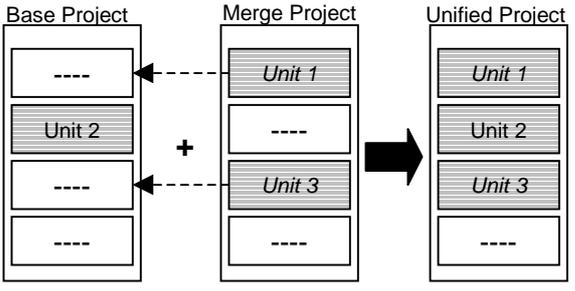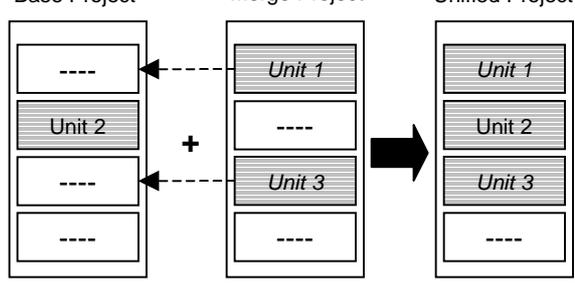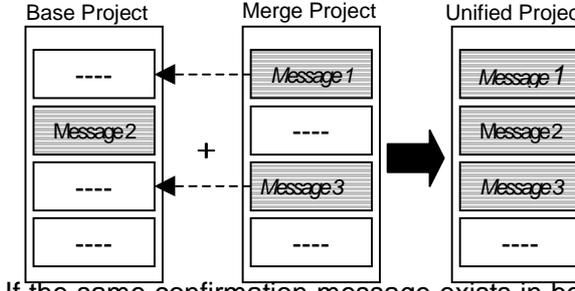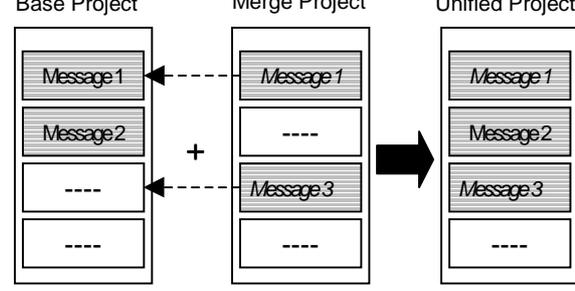
4-2-3 Information not merged

The following settings are not merged by NS Project Merge Tool and those settings on base project will be reflected to the newly created project after merging projects.

- System settings(Settings in PT, Initial, and History tab)
- Project Properties(Settings in Title, Switch Label, Macro, Select Language tab)
- Options(Settings in Color Dialog, Edit/Disp., Editor tab)
- Password Settings
- Alarm/Event Parameter Settings
- Add Alarm/Event Info Settings
- All Setting Files(INI file)

Reference

When settings in **Comm-All** tab of System Setting are the same, and each protocol settings(baud rate , IP address etc…) differs, those on base project will be reflected to the newly created project when merge has been completed .

Section 5 Error messages and Countermeasures

This section describes error messages displayed on NS Project Merge Tool and probable countermeasures in the following table.

<Error Message Dialog>

The following dialog box will be displayed if an error occurs when merging projects.

Reference

Error display shows error messages and error codes such as "Error Code =[B010]. Error code changes depending on the error contents. Usually error messages describe error contents, however, please note the code just in case when you contact with OMRON service representative if you have any trouble caused by computing environment such as system error.

Message	Probable Cause	Countermeasure
An output folder does NOT exist.	The specified path does not exist.	Specify the path again for output folder.
Base project is not set.	Base project is not set.	Set base project.
Cannot execute the process because memory is insufficient.	Disk free space is insufficient to output the unified file.(Disk free apace is less than 20Mbytes.)	- Delete unnecessary files and make disk free space 20Mbytes or more. - Specify the folder which has sufficient free disk space.
Cannot find the base project. Set the base project again.	The specified base project does not exist.	Set base project again.
Cannot find the merge project. Set the merge project again.	The specified merge project does not exist.	Set merge project again.
Cannot merge the projects because the number of Alarms/Events will be exceeded 500 after merging those projects.	The number of Alarms/Events set in base project and merge project exceeded 500.	Reduce the number of Alarms/Events set on either project until there are 500 Alarms/Events or fewer.
Cannot merge the projects because the total number of Always Logging Address will be exceeded 50 after merging those projects.	The total number of Always Logging Address exceeded 50.	Reduce the total number of Always Logging Address set on either project until there are 50 addresses or fewer.
Cannot merge the projects because the total number of Always Logging Points will be exceeded 5000 points after merging those projects.	The total number of Always Logging Points exceeded 5000 points.	Reduce the total number of Always Logging Points set on either project until there are 5000 points or fewer.
Cannot merge the projects because the total number of Logging Points Total will be exceeded 51200 points after merging those projects.	The total number of Logging Points Total exceeded 51200 points.	Reduce the total number of Logging Points total set on either project until there are 51200 points or fewer.

Cannot merge the projects because the version of base project is not supported by this tool.	The base project is not project data ver.2.X.	If the project data is Ver1.X, convert it to Ver2.X and then perform merge.
Cannot merge the projects because the version of merge project is not supported by this tool.	The merge project is not project data ver.2.X.	If the project data is Ver1.X, convert it to Ver2.X and then perform merge.
Cannot merge the projects by Add type because confirmation messages (number=%d) will be overlapped with those of base project.	Confirmation message number set in base project and merge project overlapped when merging projects by Add type.	When merging projects by Add type, set confirmation message numbers not to overlap between base project and merge project.
Cannot merge the projects by Add type because data blocks (number=%d) will be overlapped with those of base project.	Data Block number set in base project and merge project overlapped when merging projects by Add type.	When merging projects by Add type, set Data Block numbers not to overlap between base project and merge project.
Cannot merge the projects by Add type because data log groups (number=%d) will be overlapped with those of base project.	Log group number set in base project and merge project overlapped when merging projects by Add type.	When merging projects by Add type, set Log group numbers not to overlap between base project and merge project.
Cannot merge the projects by Add type because the address set in Alarm/Event Setting (number on the base project =%d) will be overlapped with those of base project.	Address set in Alarm/Event Setting of base project and merge project overlapped when merging projects by Add type.	When merging projects by Add type, set addresses for Alarm/Event Setting not to overlap between base project and merge project.
Cannot merge the projects by Add type because the screen number (screen number =%d) will be overlapped with those of base project.	Screen number set in base project and merge project overlapped when merging projects by Add type.	When merging projects by Add type, set screen number not to overlap between base project and merge project.
Cannot merge the projects by Add type because the Unit No. in Unit & Scale Setting will be overlapped with those of base project.	Unit & Scale number set in base project and merge project overlapped when merging projects by Add type.	When merging projects by Add type, set Unit & Scale number not to overlap between base project and merge project.
Cannot specify the base project as unified project.	The same project name for base project and unified project has been set.	Cannot specify the same project for base project and unified project. Set the unique project name for both.
Cannot specify the merge project as unified project.	The same project name has been set for merge project and unified project.	Cannot specify the same project for merge project and unified project. Set the unique project name for each.
Communication settings differs between base project and merge project. Match the settings on the merge project with those on the base project.	Communication settings differ between base project and merge project.	Match the settings on the merge project with those on the base project.
File access error(%s) (%s indicates project type and file name.)	File error detected while accessing to base project or merge project.	Delete the file. Specify other disk as an output folder.
File check sum error (%s) (%s indicates project type and file name.)	Base project or merge project corrupted.	Specify other file as base project or merge project.

Memory is insufficient.	Memory capacity for operating NS Project Merge Tool is insufficient.	Exit all other applications. Upgrade windowing environment or computing environment such as increasing memory or virtual memory of PC.
Merge project is not set.	Merge project is not set.	Set a merge project.
Model type differs between base project and merge project. Match the settings on the merge project with those on the base project.	Model type differs between base project and merge project.	Specify base project and merge project for the same PT type.
Output folder is not set.	Output folder is not set.	Set an output folder.
Settings in the Host Registration differ between base project and merge project. Match the settings on the merge project with those on the base project.	Settings in the Host Registration differ between base project and merge project.	Specify base project and merge project with the same settings for the host registration.
System program version differs between base project and merge project. Match the settings on the merge project with those on the base project.	System program version differs between base project and merge project.	Specify base project and merge project for the same project version.
The number of labels differ between base project and merge project. Match the settings on the merge project with those on the base project	The number of labels differs between base project and merge project.	Specify base project and merge project that the same number of labels has been set.
The unified project name is not correct.	Characters which cannot be used for the file name have been set.	Change the file name of unified project with applicable characters . Length: up to 42 characters Applicable characters: alphanumerics(A to Z, a to z, o to 9),under score(_),dollar mark($), periods(.)
The unified project name is not set.	The unified project is not set.	Set unified project name.
System Error	Operating System of PC error.	Upgrade windowing environment or computing environment such as increasing memory or virtual memory of PC. Contact your OMRON service representative.