

**For Sumitomo Fusion Splicer**

# **Maintenance Application**

## **User Guide**

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# Contents

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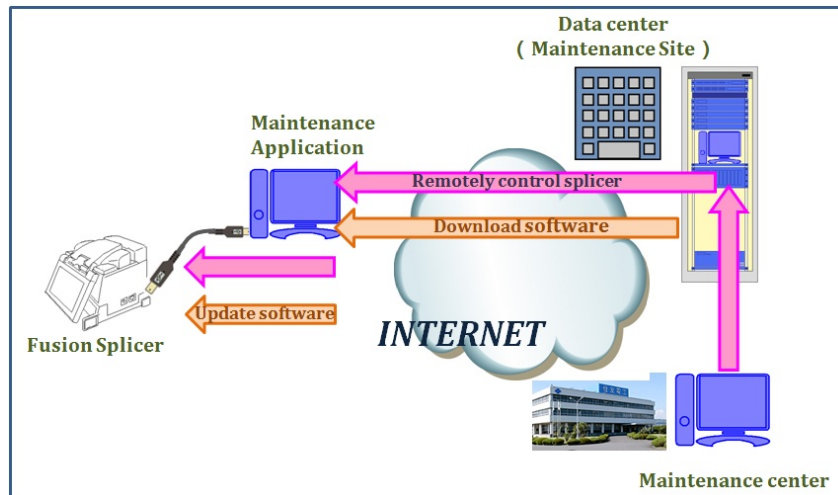
	Page
<b>0. Introduction</b>	<b>3</b>
<b>1. Downloading the Maintenance Application</b>	<b>4</b>
1-1. Microsoft .NET Framework 4	4
1-2. Logging in to Maintenance Application download page	5
1-3. Downloading the Maintenance Application	6
<b>2. Installing the Maintenance Application on the PC</b>	<b>8</b>
2-1. Installing the maintenance Application on the PC	8
2-2. Installing the USB driver on the PC	11
2-3. Uninstalling the Maintenance Application	17
<b>3. Using the Maintenance Application</b>	<b>20</b>
3-1. Starting the Maintenance Application	20
3-2. Exiting the Maintenance Application	22
3-3. Maintenance Application function	23
3-4. Operating the splicer from the PC (“Monitor / PC Operation” function)	24
3-5. Remote diagnosis by Maintenance center (“Remote control” function)	25
3-6. Updating the splicer software (“Software update” function)	27
3-7. Viewing splicer’s settings (“Splicer settings” function)	29
3-8. Viewing splice data (“Splice data” function)	30
3-9. Viewing error log (“Error log” function)	31
3-10. Viewing stored fiber images (“Image history” function)	32

# 0. Introduction

The Maintenance Application is the PC software specially designed for Sumitomo fusion splicers and always used with a splicer connected via USB cable for the purpose of not only updating splicer software but also taking remote diagnosis support from your regional maintenance center.

Please read this manual carefully and keep a suitable storage for reference

**Note: Currently the Application only supports the TYPE-71C/TYPER-Q101-CA/TYPER-81C/Z1C splicers.**



## Recommended system requirements

OS: Windows 7, Windows Vista, Windows XP SP3 or later

Processor: Intel Pentium III 12.GHz or faster

Memory: 2GB or more

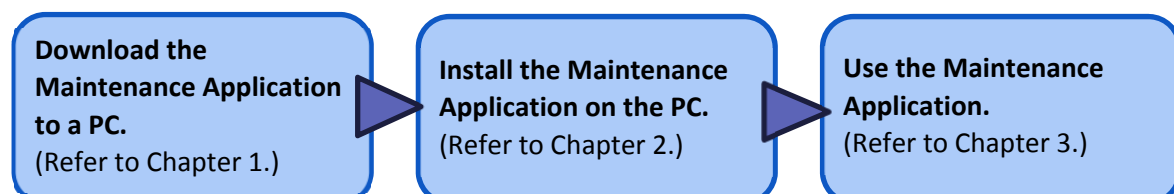
HDD: Minimum 1 GB of capacity (more than 1 GB of hard disc space)

Network: Ethernet (1Mbps or better)

## Required item

A USB cable (2.0 mini-B type)

## Procedure overview



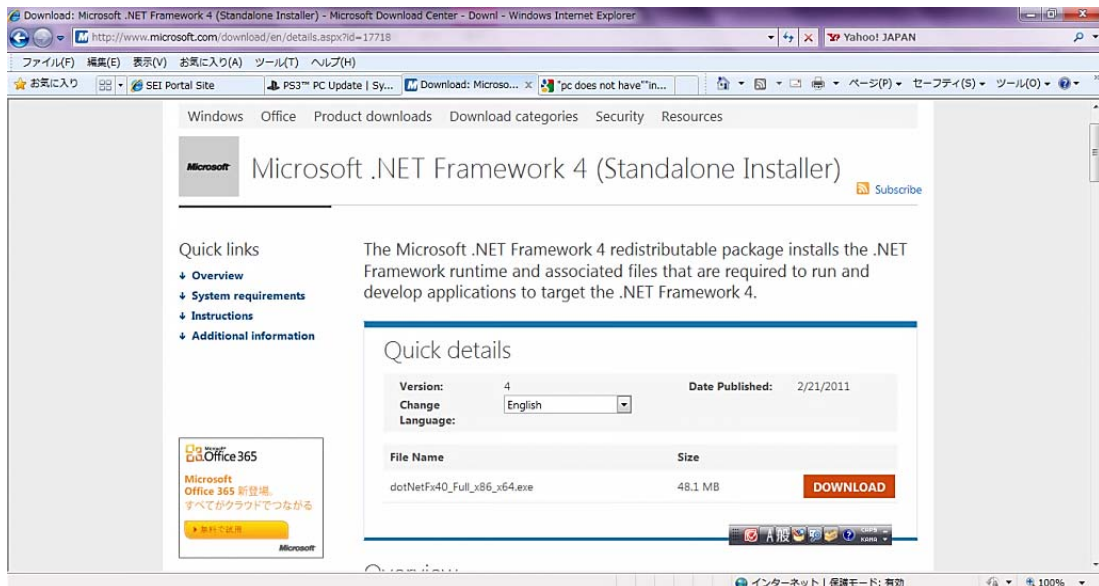
# 1. Downloading the Maintenance Application

## 1-1. Microsoft .NET Framework 4

To use the Maintenance Application, **Microsoft .NET Framework 4** is required. First make sure that the PC has the Framework 4 installed. And if not, download it from Microsoft web site.

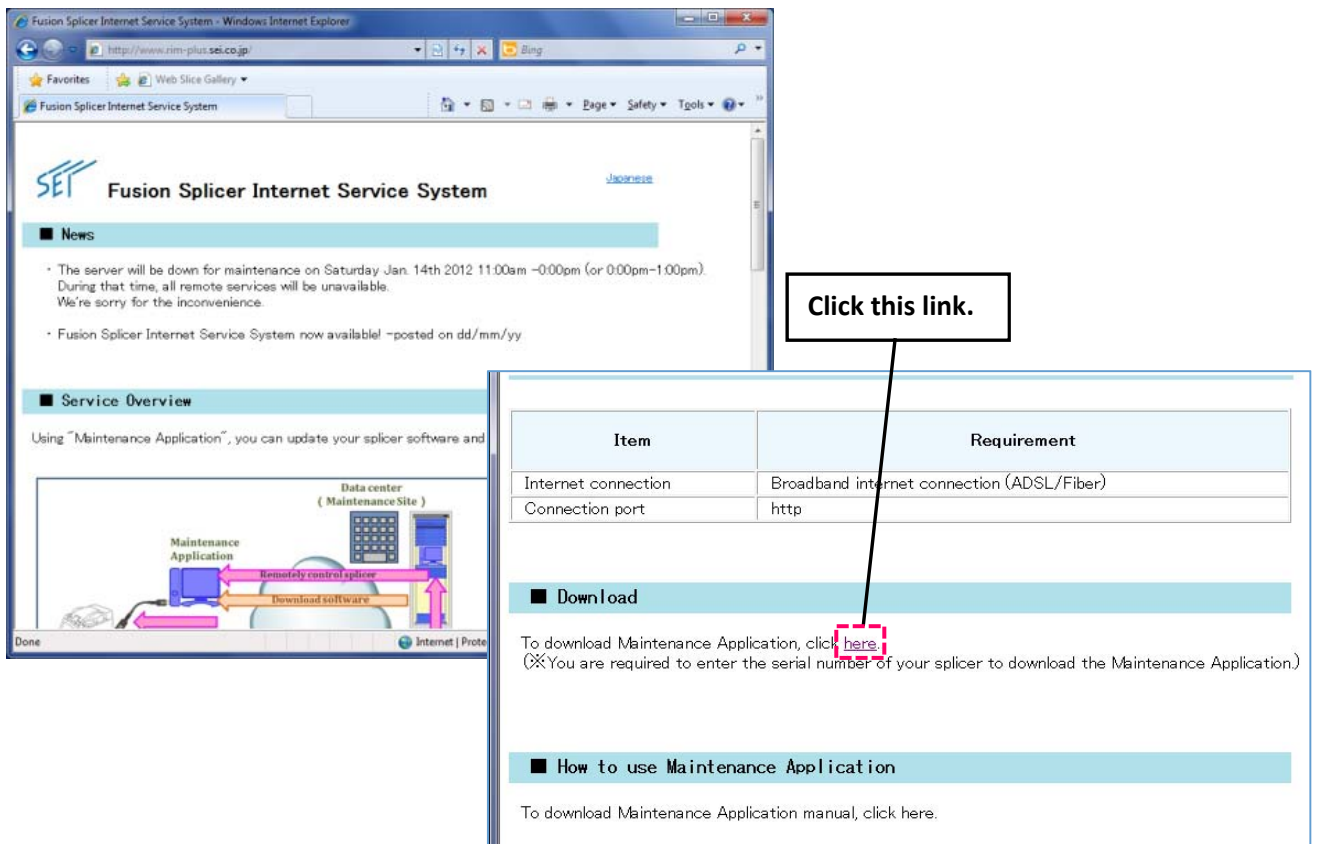
(English version: <http://www.microsoft.com/download/en/details.aspx?id=17718> )

After you've done this step, go to step 1-2. (See the next page.)



## 1-2. Logging in to Maintenance Application download page

To download the Maintenance Application, open your web browser and go to Sumitomo internet service system web site <http://www.rim-plus.sei.co.jp/>. (The web site address is also stated in the splicer operation manual.) Scroll down the page and click the link in the Download section.



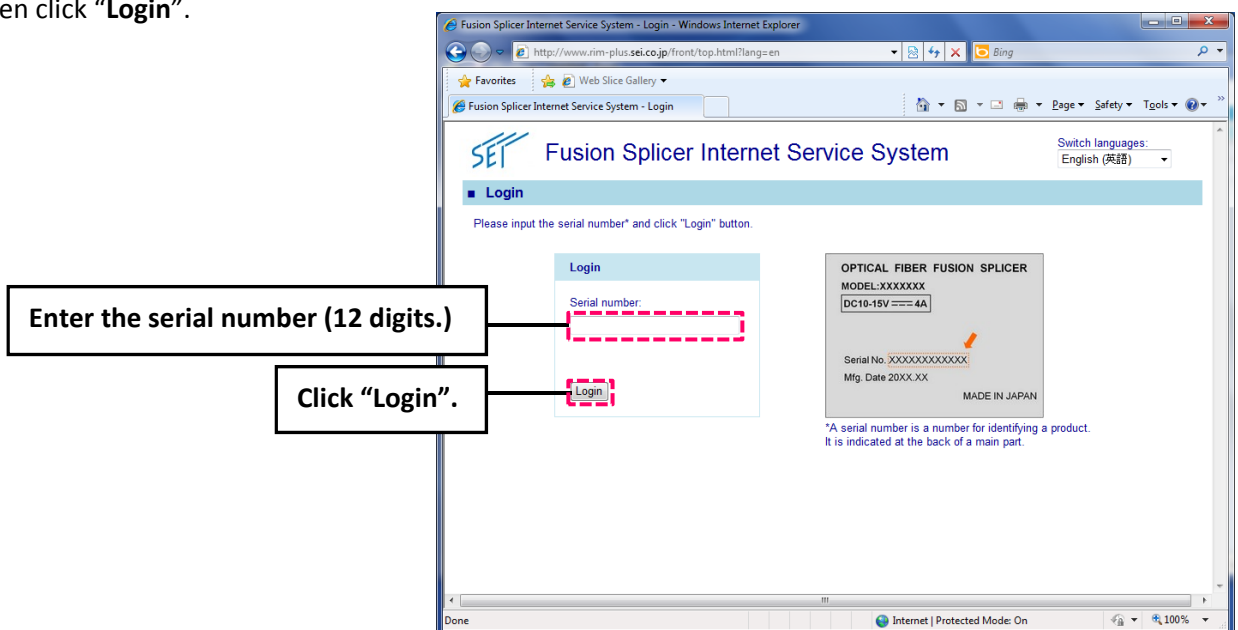
The screenshot shows the Fusion Splicer Internet Service System website. The 'Download' section is highlighted, and a callout box points to the 'here' link in the text: 'To download Maintenance Application, click [here](#).' Below this, there is a table with requirements for the application.

Item	Requirement
Internet connection	Broadband internet connection (ADSL/Fiber)
Connection port	http

Below the table, there are sections for 'Download' and 'How to use Maintenance Application'. The 'Download' section contains the text: 'To download Maintenance Application, click [here](#). (※ You are required to enter the serial number of your splicer to download the Maintenance Application.)' The 'How to use Maintenance Application' section contains the text: 'To download Maintenance Application manual, click [here](#).'



The Login page is displayed. You are required to enter the serial number (12 digits) of the splicer you have. Then click "Login".



The screenshot shows the Fusion Splicer Internet Service System Login page. The 'Login' section is highlighted, and a callout box points to the 'Serial number' input field. Another callout box points to the 'Login' button. The page also displays a sample splicer label with the following information:

OPTICAL FIBER FUSION SPLICER  
MODEL:XXXXXX  
DC10-15V == 4A

Serial No. XXXXXXXXXXXX  
Mfg. Date 20XX.XX  
MADE IN JAPAN

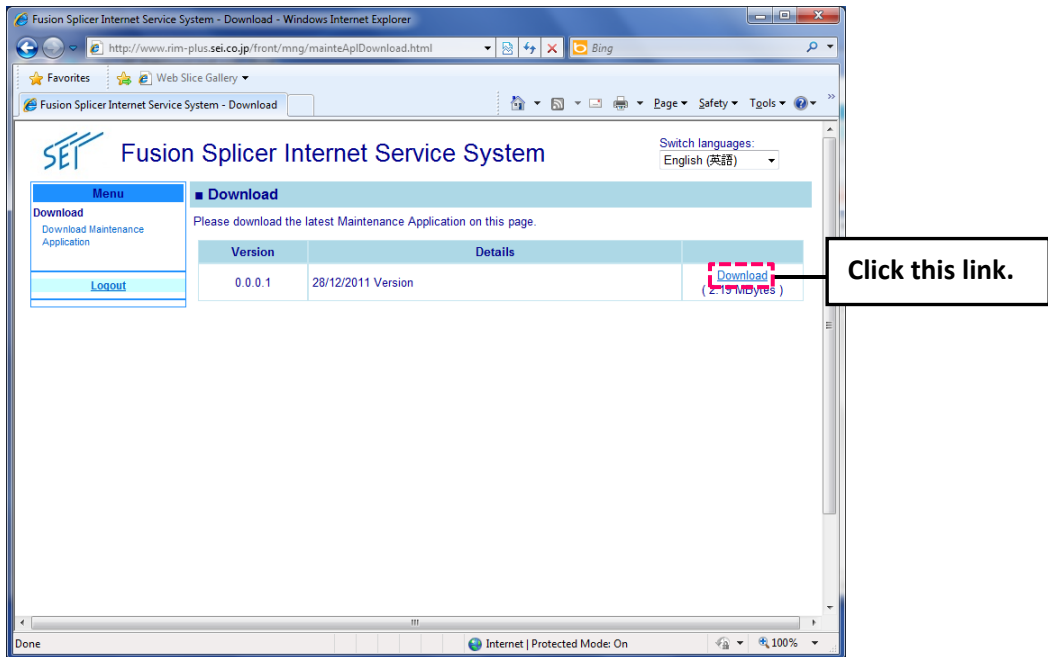
\*A serial number is a number for identifying a product. It is indicated at the back of a main part.

Go to step 1-3. (See the next page.)

# 1-3. Downloading the Maintenance Application

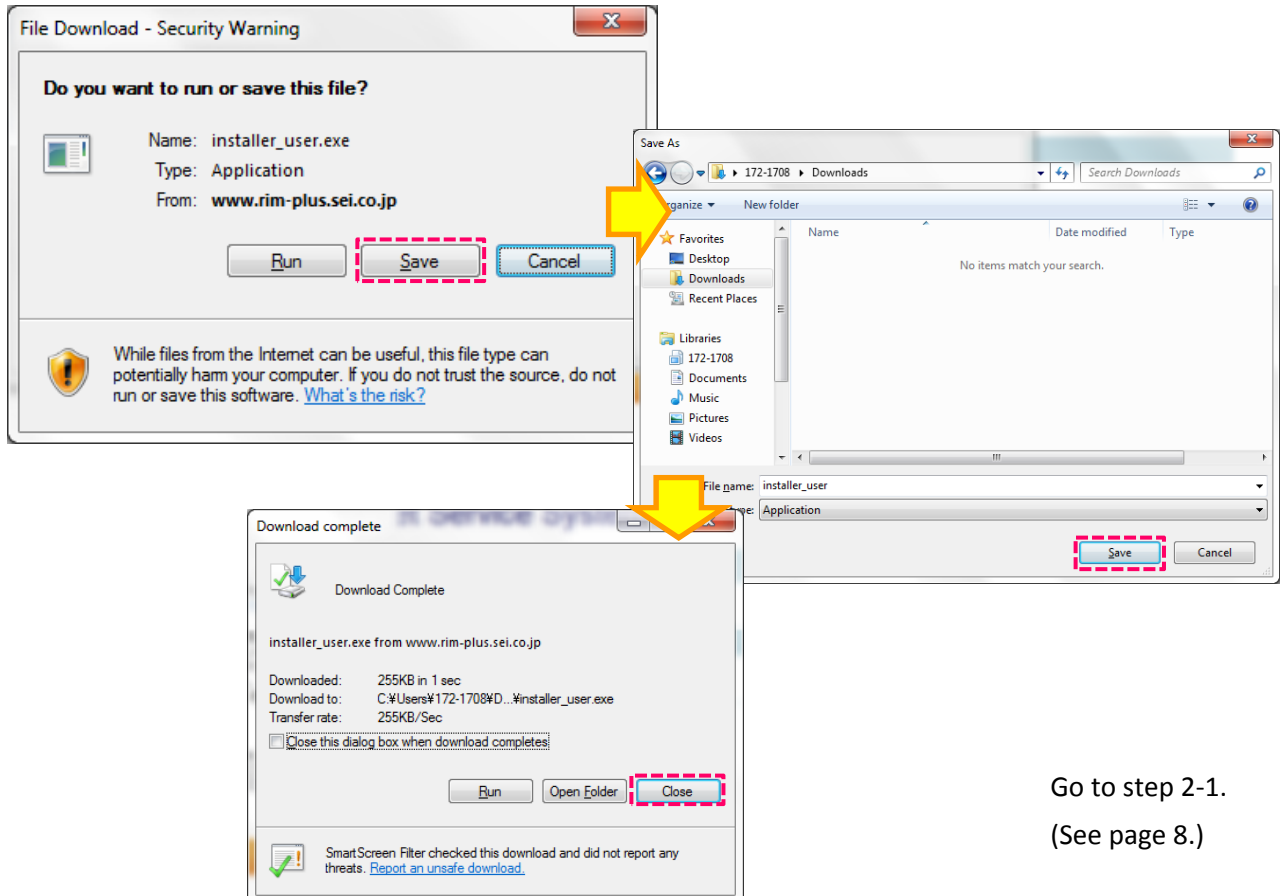
The Maintenance Application download page is displayed. Click the link in the page to download the Application file.

**Note: The Maintenance Application file is common for the TYPE-71C/TYPER-Q101-CA/TYPER-81C/Z1C splicers.**



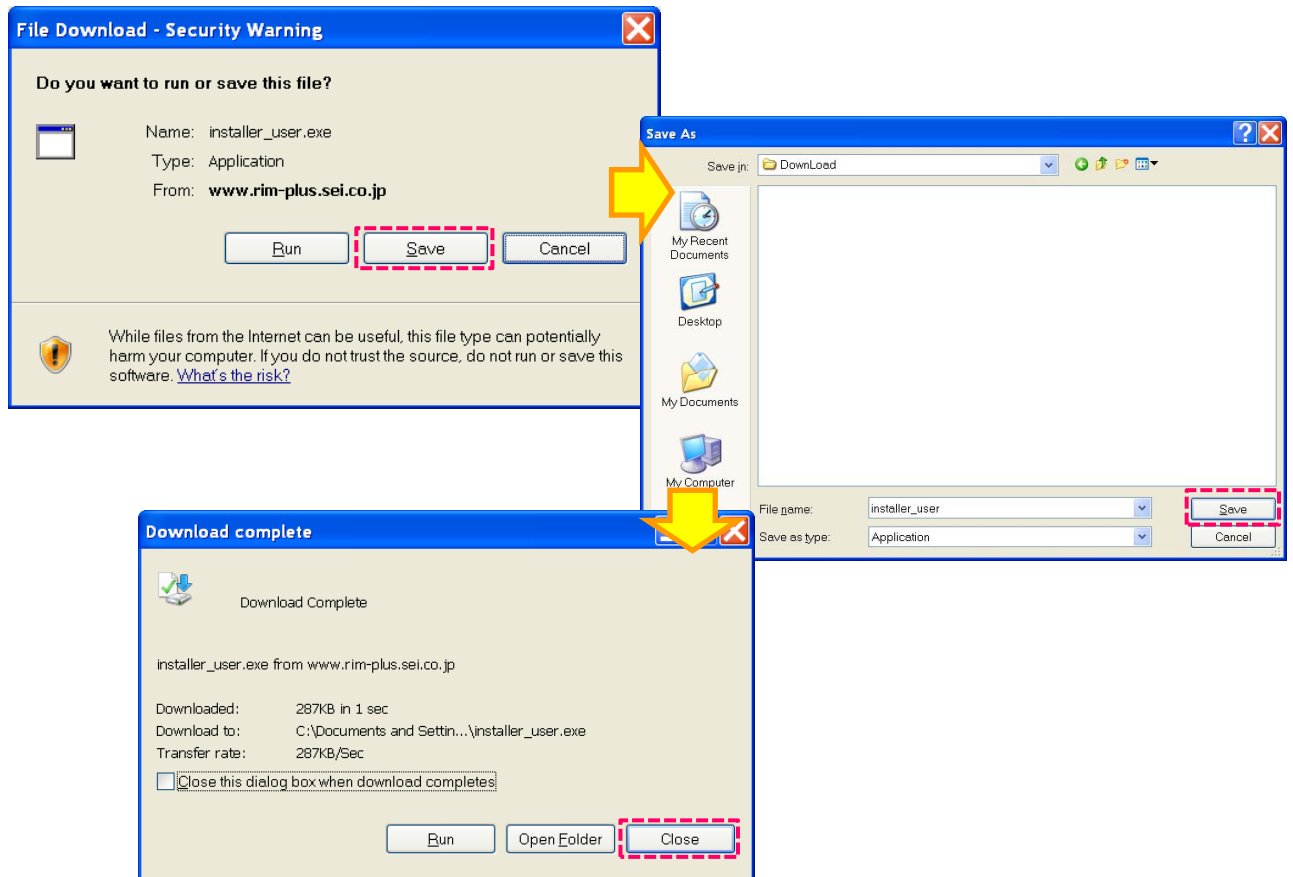
“END-USER LICENSE AGREEMENT FOR SOFTWARE” is displayed. Click “Agree”.  
Click “Save” to save the Application file “installer\_user.exe” to the PC.

<Windows 7>



Go to step 2-1.  
(See page 8.)

## <Windows XP SP3>



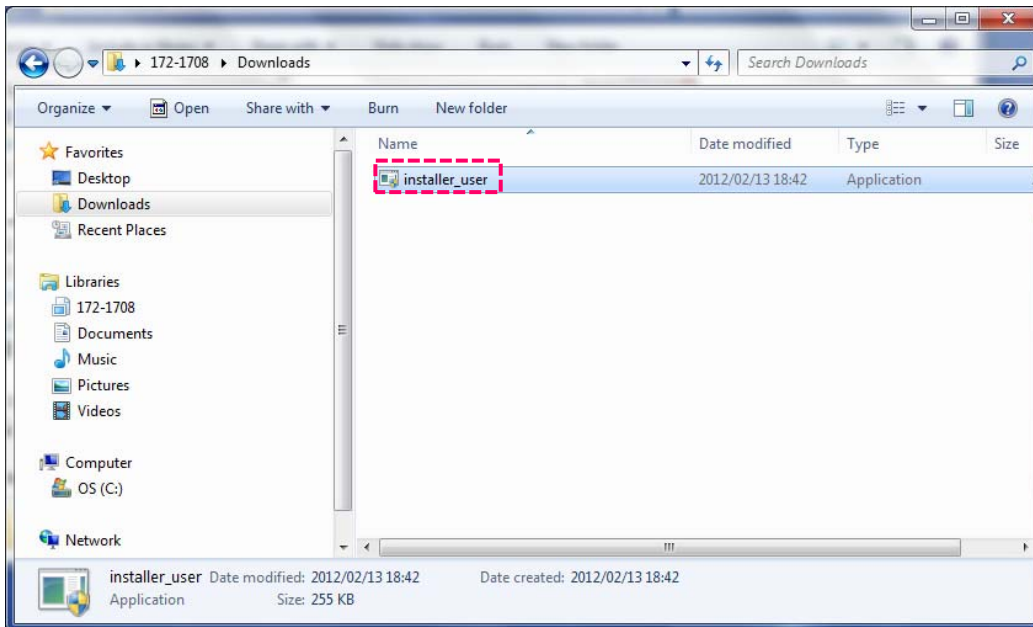
Go to step 2-1. (See the next page.)



## 2. Installing the Maintenance Application on the PC

### 2-1. Installing the Maintenance Application on the PC

Open the folder where “**Installer\_user.exe**” has been saved and double click it to start to install on the PC.



If “Microsoft .NET Framework 4” has not been installed on the PC, a pop-up window that prompts you to install it first will appear. Install it following the on-screen instructions.

**<Windows 7>**

**Click “Accept”.**

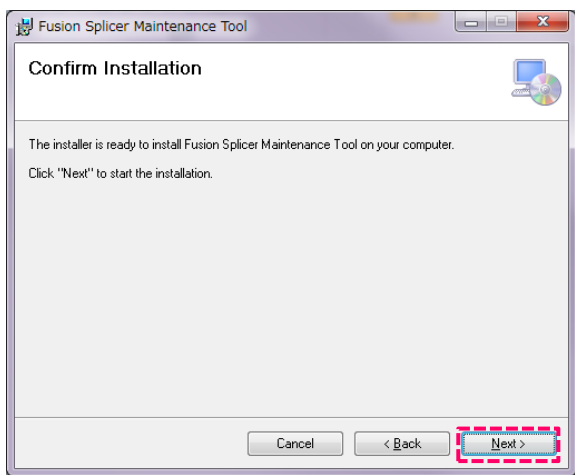
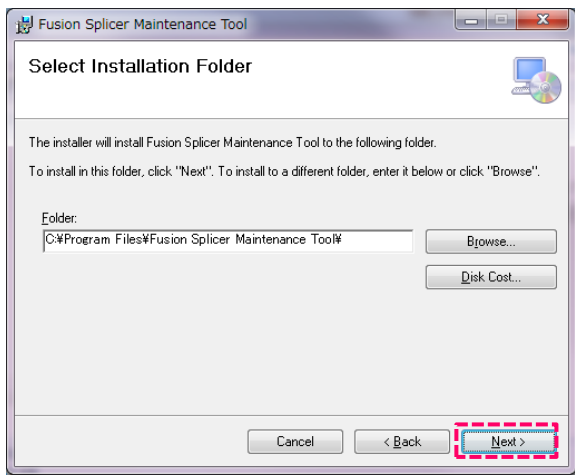
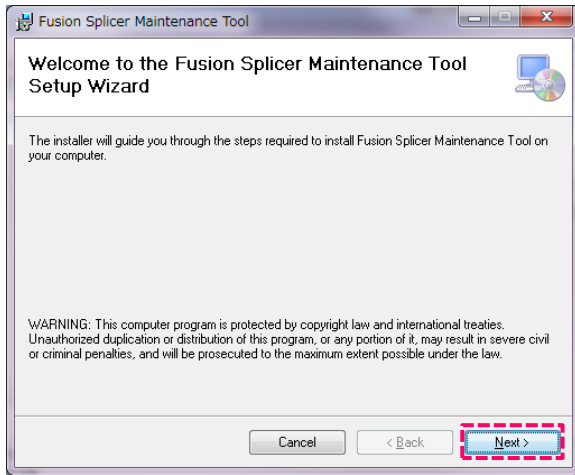
**Click “Yes” to reboot the PC.**

**After the PC reboots this window is sometimes displayed. Click “Close” and proceed to the next step. (Refer to the next page.)**

**<Windows XP SP3>**  
The procedure is the same as that on the Windows 7 but rebooting the PC is not needed.

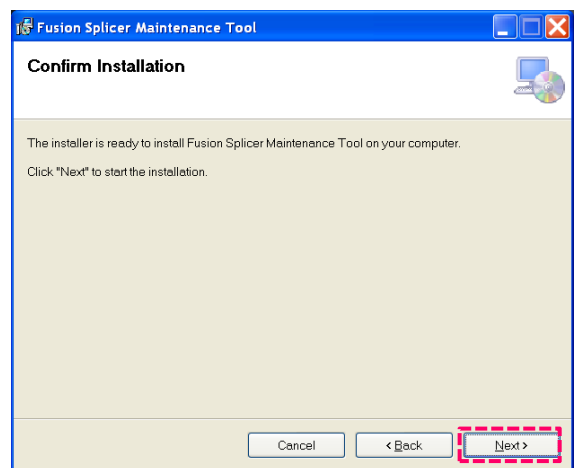
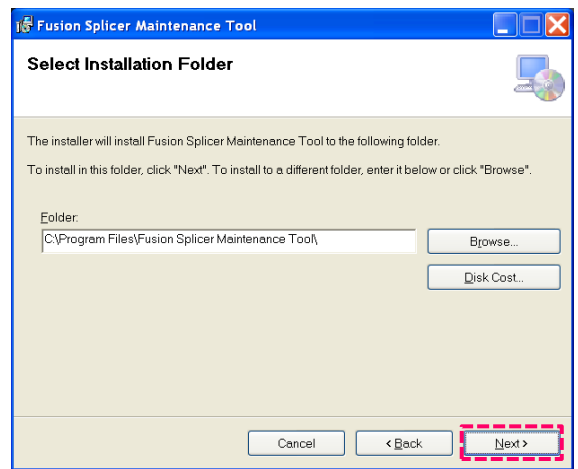
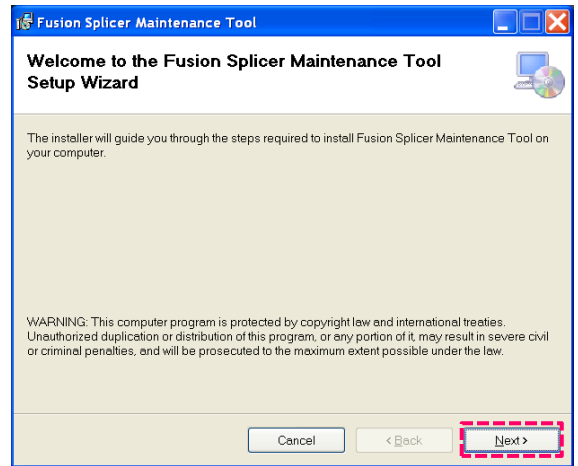
Follow the on-screen instructions to complete the installation.

<Windows 7>

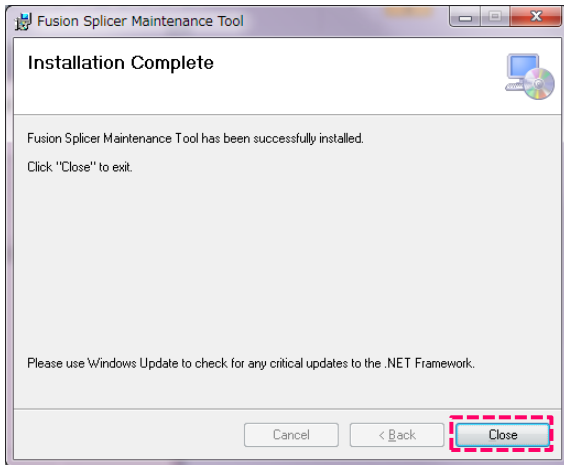
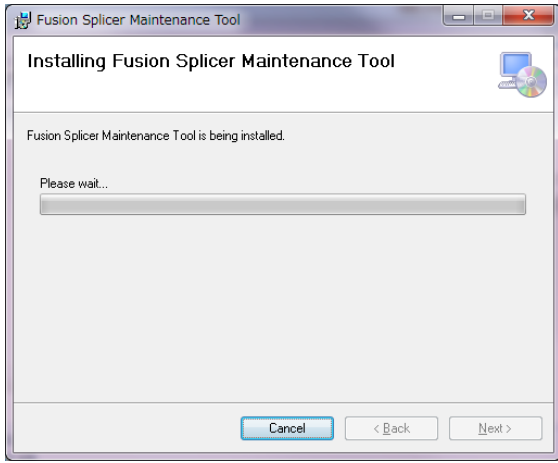


Continue to the next page.

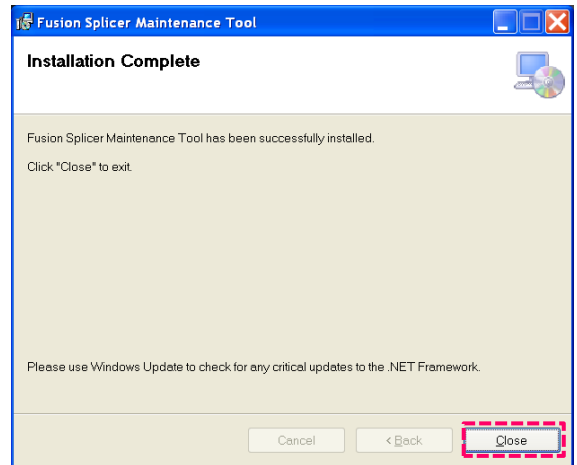
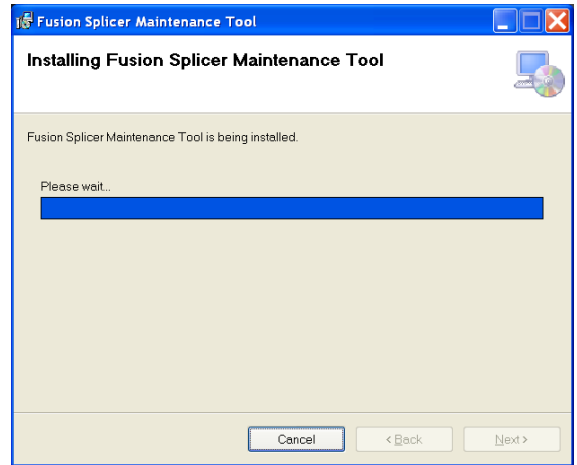
<Windows XP SP3>



Continue to the next page.



Completed.



Completed.

After the installation, a short cut icon is automatically created on the desktop.



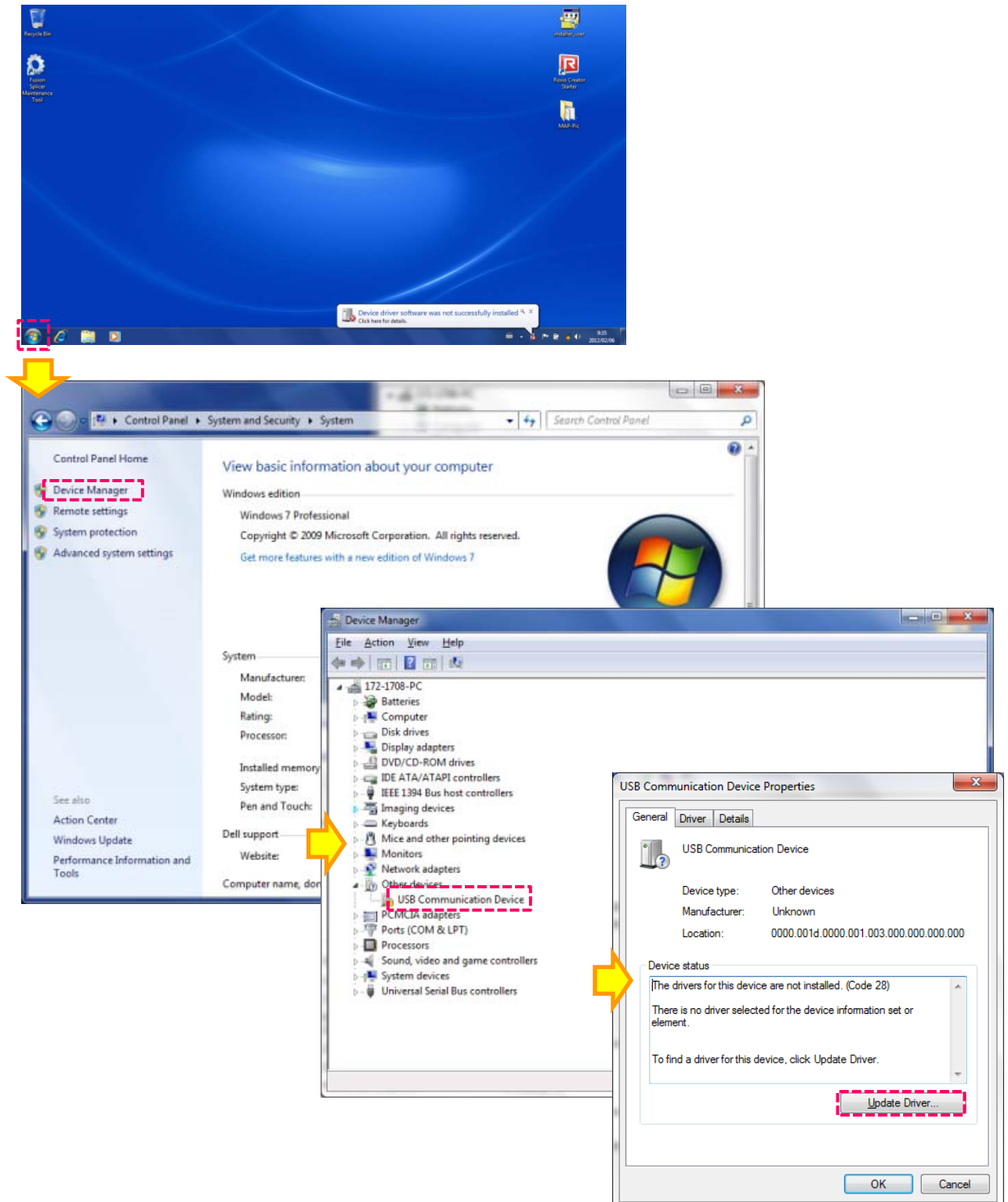
Go to step 2-2. (See the next page.)

## 2-2. Installing the USB driver on the PC

Install the USB driver on the PC referring the following instructions. Connect the PC to any T-71C/T-Q101-CA/T-81C/Z1C fusion splicer via USB cable and switch on the splicer. (Leave the splicer on.)

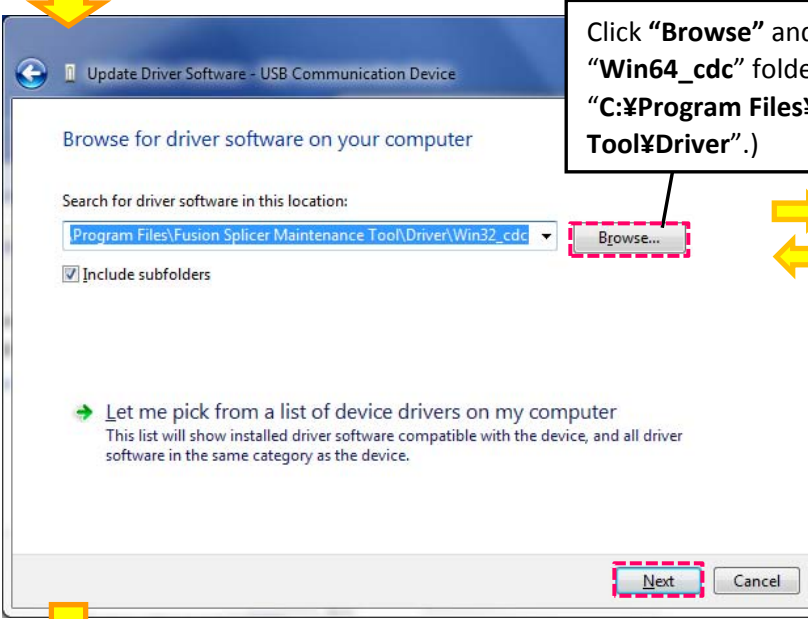
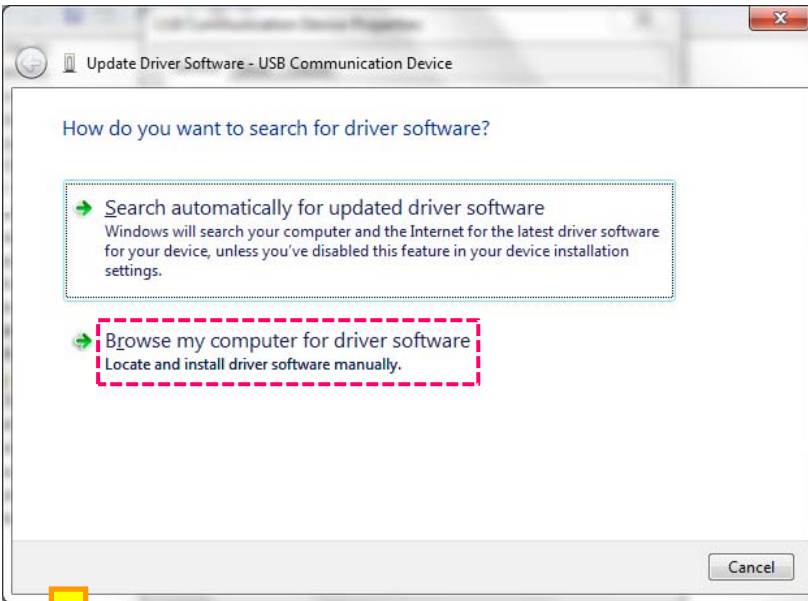
### <Windows 7>

Click the **Start** button. Select **“Control Panel”** > **“System and Security”** > **“System”** > **“Device Manager”**. The Device Manger window appears. Double-click **“USB Communication Device”** under the **“Other Devices”** category. The USB Communication Device Properties window appears. Click **“Update Driver”** on the General tab.

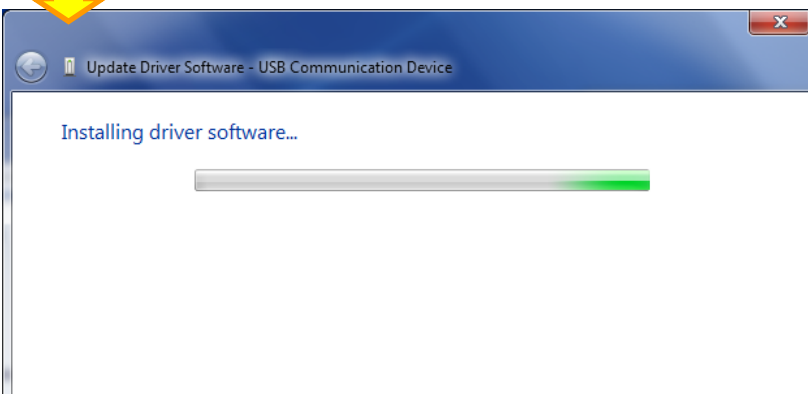
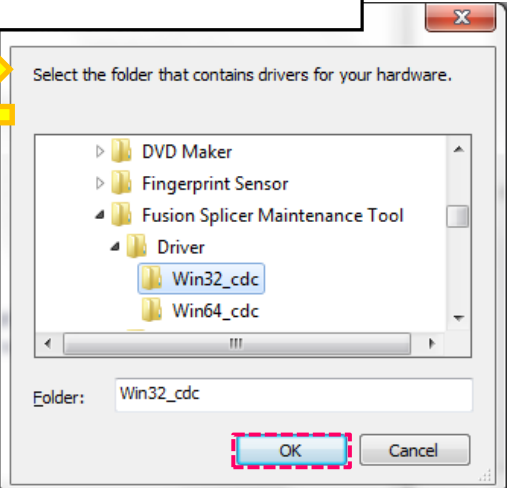


Continue to next page.

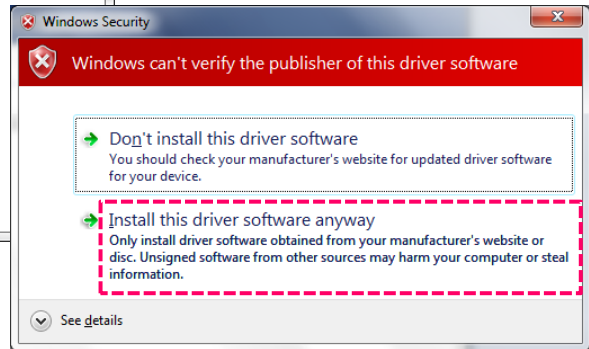
This will launch the Hardware Update Wizard. Select **“Browse my computer for driver software”**.



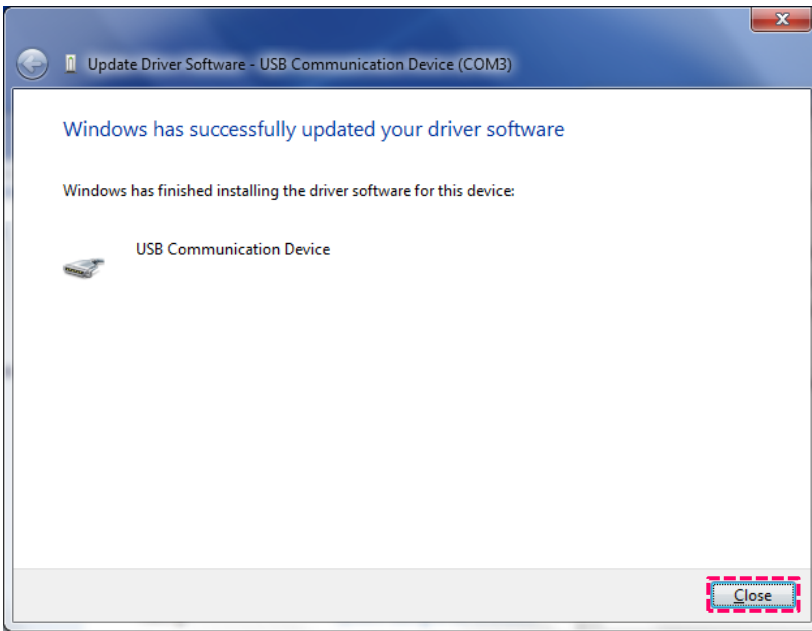
Click **“Browse”** and locate the **“Win32\_cdc”** or **“Win64\_cdc”** folder. (The driver is located in **“C:\Program Files\Fusion Splicer Maintenance Tool\Driver”**.)



**<TIPS>**  
The USB driver is different between 32 bit/64bit on the PC.  
32 bit: Select **“Win32\_cdc”** folder.  
64 bit: Select **“Win64\_cdc”** folder.



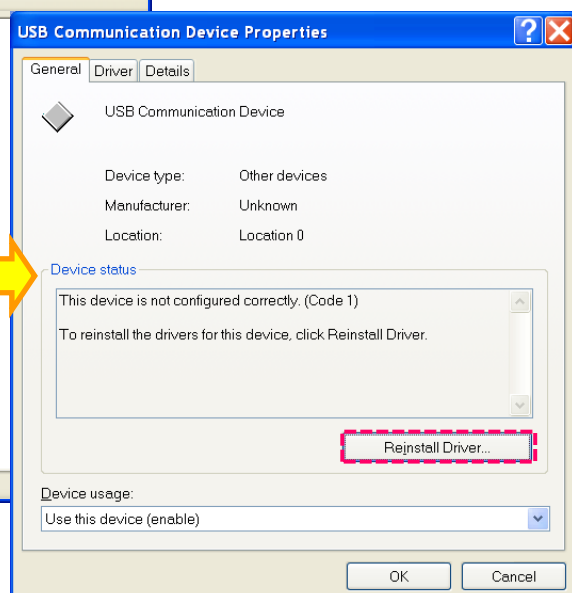
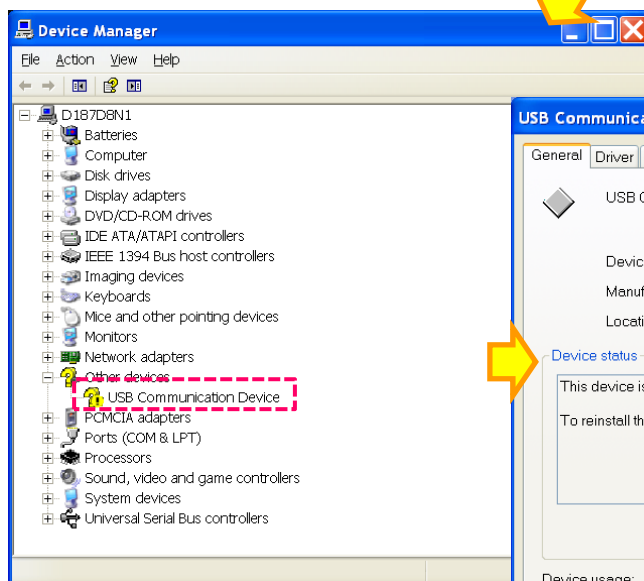
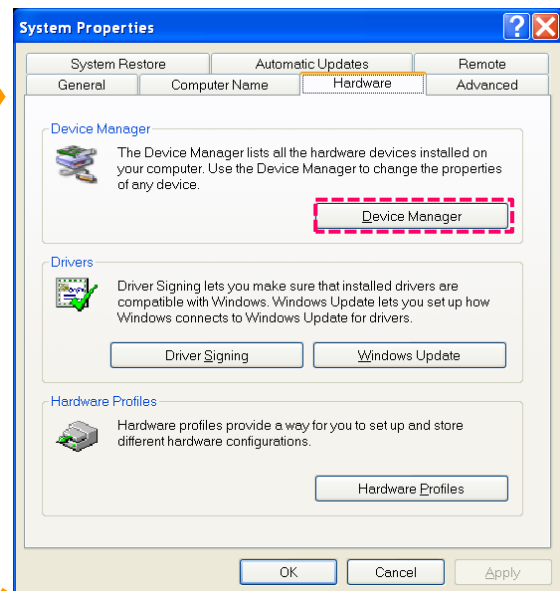
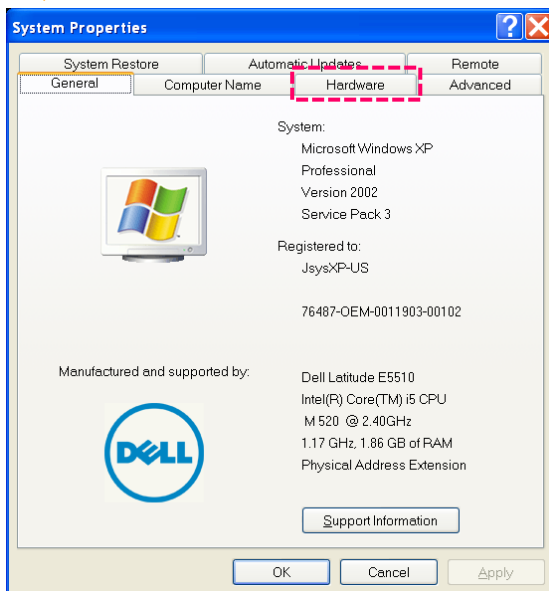
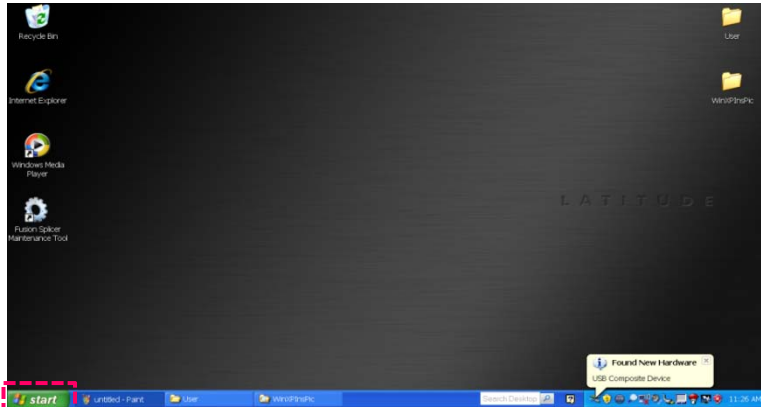
Continue to the next page.



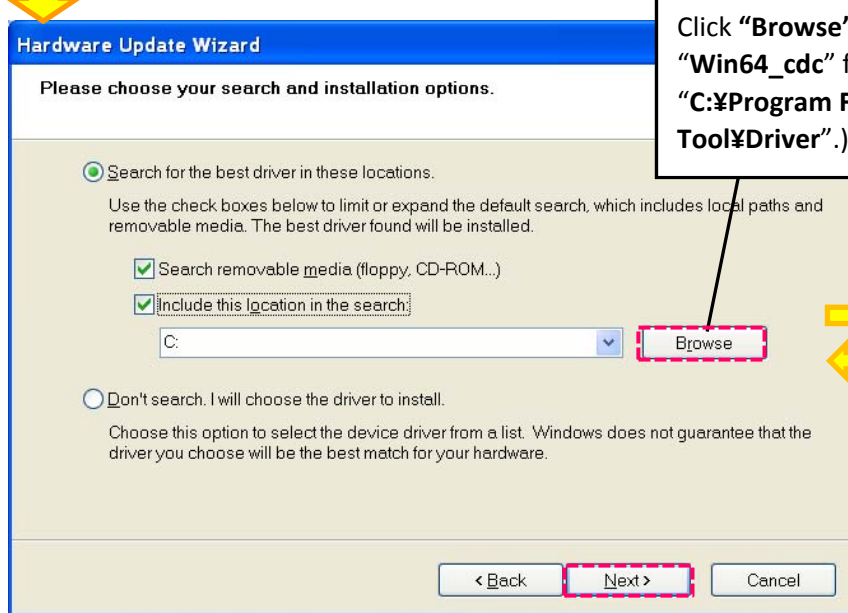
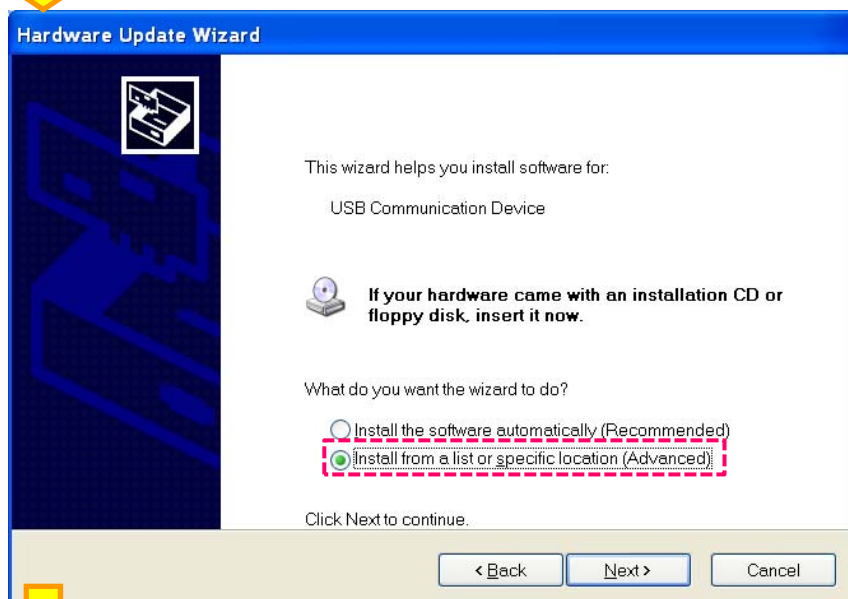
Completed.

## <Windows XP SP3>

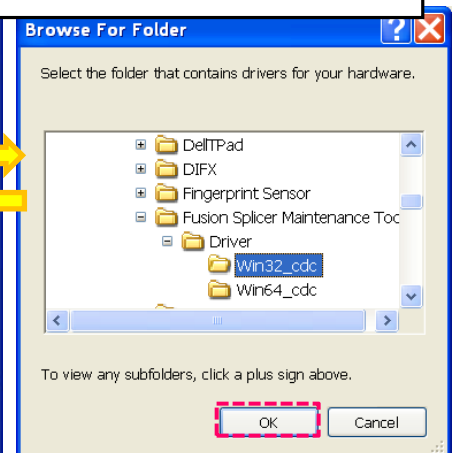
Click the Start button. Select **“Control Panel”** > **“Performance and Maintenance”** > **“System”**. The System Properties window appears. Click the **“Hardware”** tab. Click **“Device Manager”** on the **“Hardware”** tab. The Device Manager window appears. Double-click **“USB Communication Device”** under the **“Other Devices”** category. The USB Communication Device Properties window appears. Click **“Reinstall Driver”** on the General tab.



This will launch the Hardware Update Wizard.



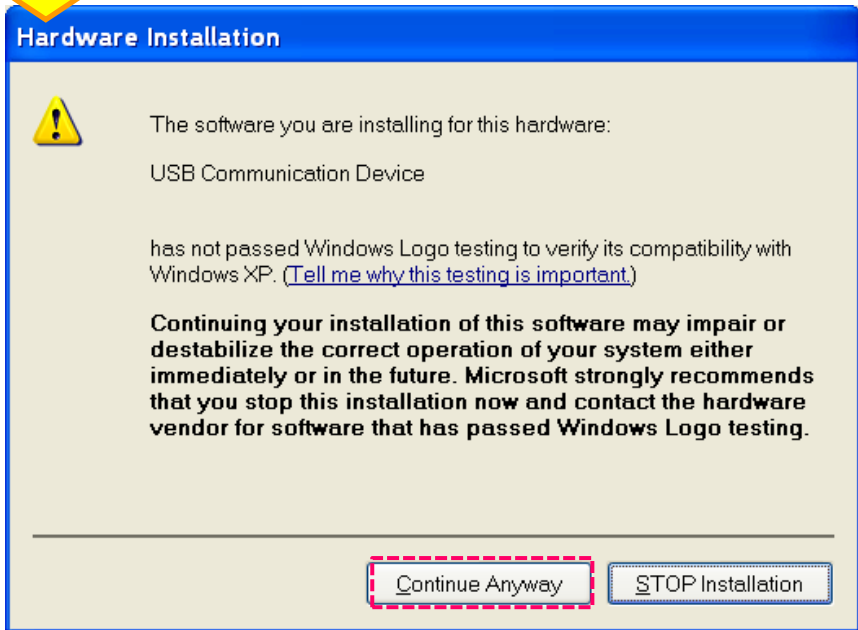
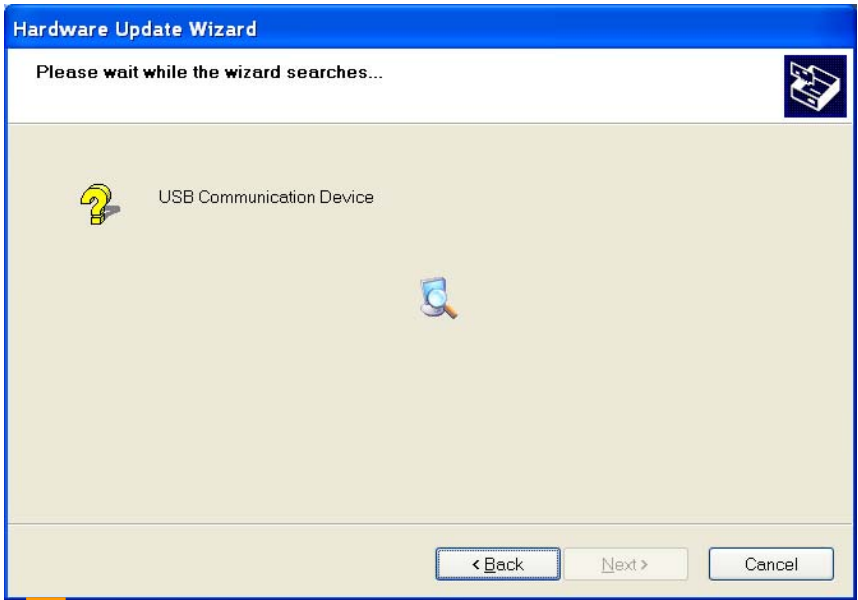
Click "Browse" and locate the "Win32\_cdc" or "Win64\_cdc" folder. (The driver is located in "C:\Program Files\Fusion Splicer Maintenance Tool\Driver".)



Continue to the next page.

**<TIPS>**  
The USB driver is different between 32 bit/64bit on the PC.  
32 bit: Select "Win32\_cdc" folder.  
64 bit: Select "Win64\_cdc" folder.





Completed.

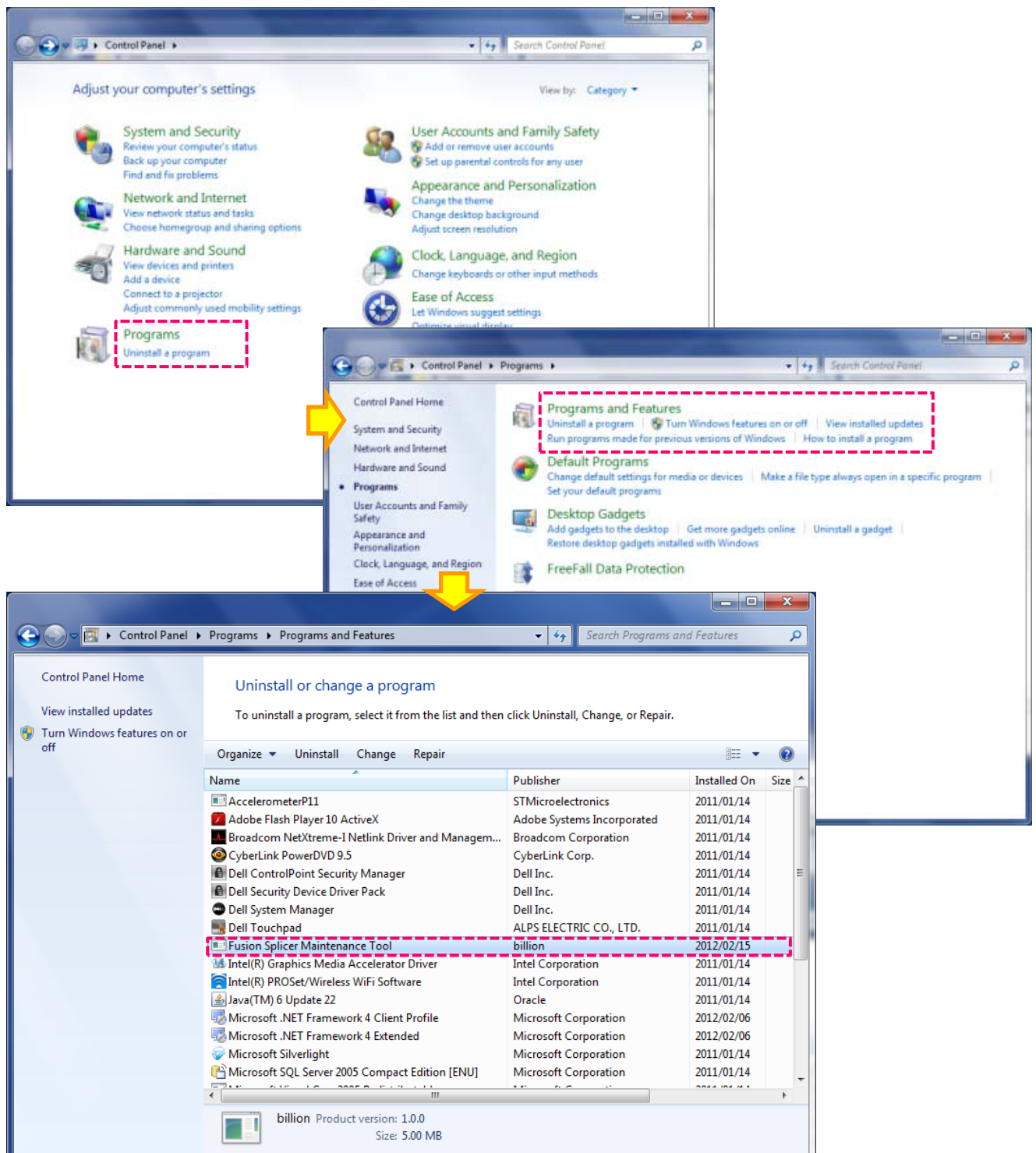
## 2-3. Uninstalling the Maintenance Application

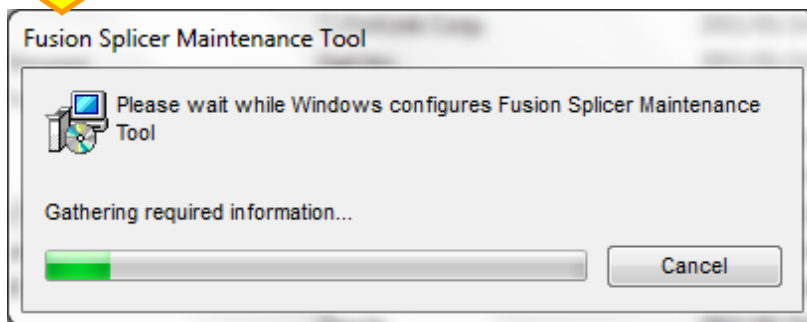
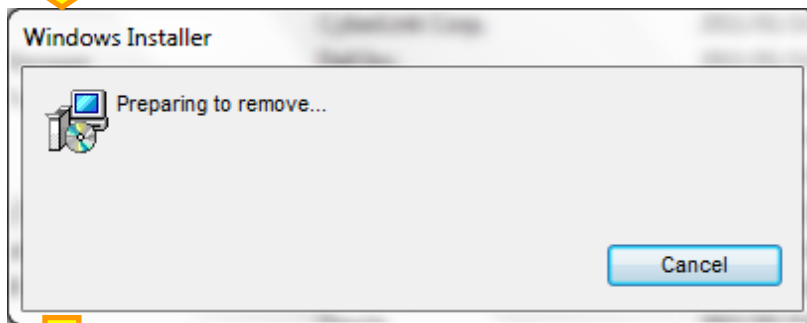
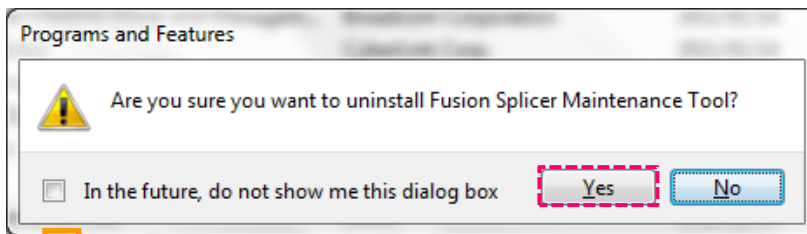
If you want to install a later version Maintenance Application than what the PC has, uninstall the current Application from the PC and then re-install the later version on the PC. Or if you do not need the Application any more, carry out this uninstallation procedure.

**Note:** If you uninstall the current Application and re-install a later version Application, no need to install the USB driver again.

### <Windows 7 >

Click the Start button. Select **“Control Panel”** > **“Programs”** > **“Programs and Features”**. Select and highlight **“Fusion Splicer Maintenance Tool”** from the list of **“Uninstall or change a program”**. Right click it and select **“Uninstall”**.

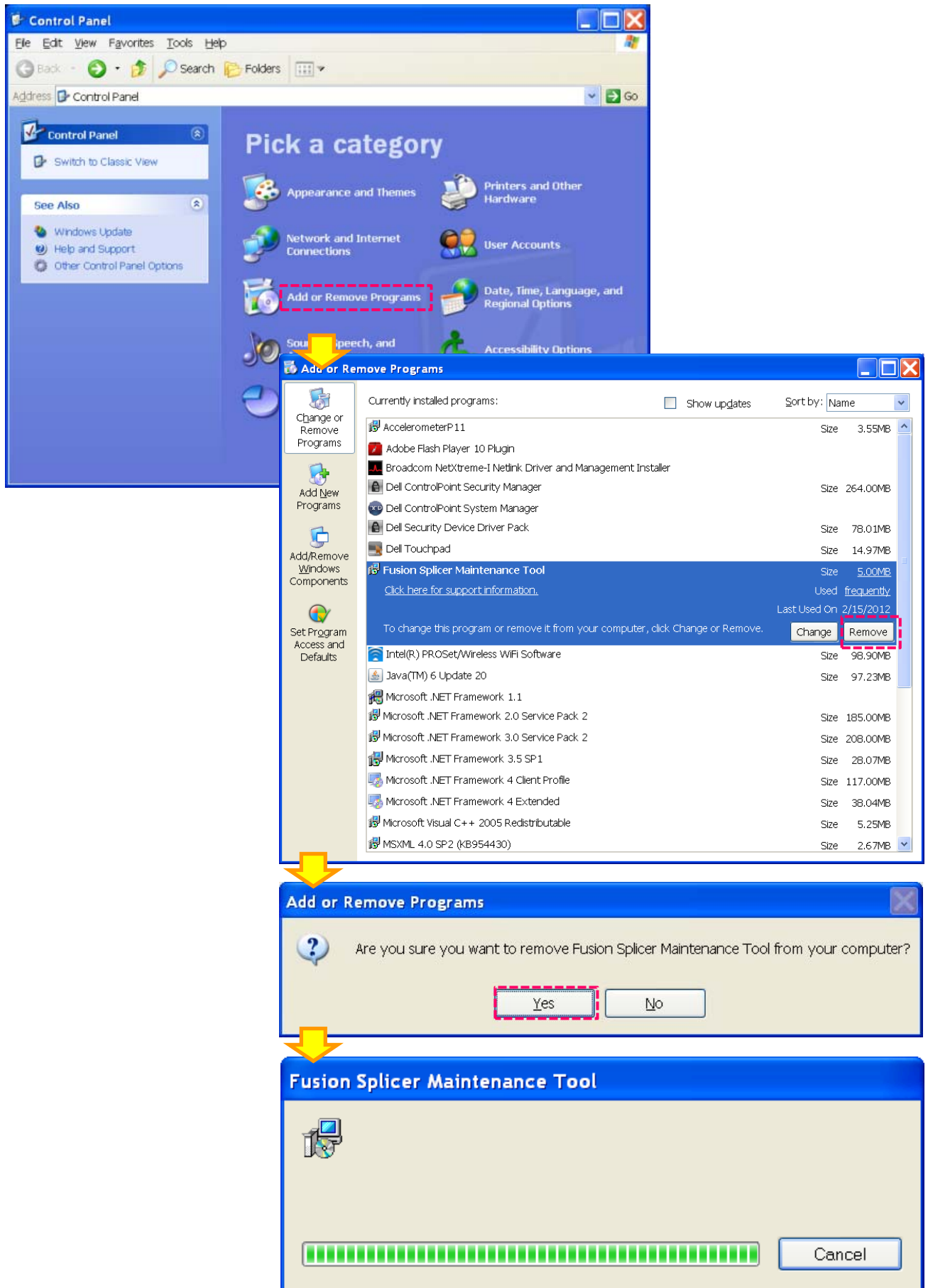




Completed.

## <Windows XP SP3>

Click the Start button. Select “Control Panel” > “Add or Remove program”. Select and highlight “Fusion Splicer Maintenance Tool”. Click “Remove”.



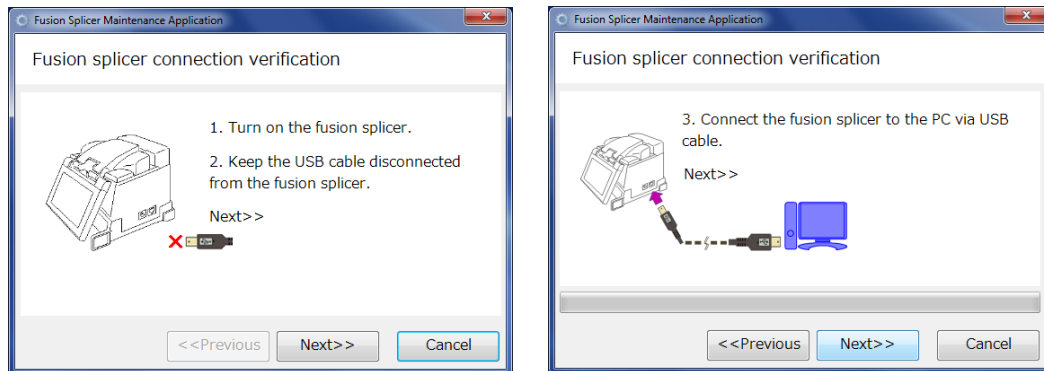
Completed.

# 3. Using the Maintenance Application

## 3-1. Starting the Maintenance Application

1) Turn on the splicer. 2) Start the Maintenance software by clicking the short cut icon on the desktop or opening Explorer and running “**MainteApp.exe**” in the Fusion Splicer Maintenance Tool folder\*. 3) Connect the splicer with the PC via USB cable. (\*C:\Program Files\Fusion Splicer Maintenance Tool)

If the illustration shown below is displayed on the PC, the splicer may not be turn on and/or not connected to the PC via USB cable. Make sure that the splicer is turn on and connected to the PC via USB cable.



The Maintenance Application window is displayed, when the splicer is verified via internet in the background.

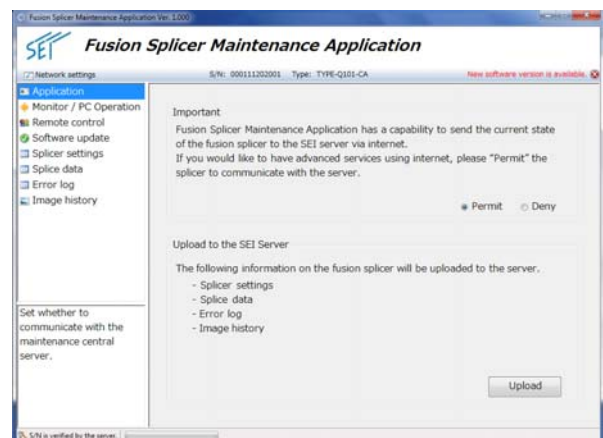
**Note: If the verification fails, the Application will give an error.**



Upon the start of the Maintenance Application, the Application communicates with the fusion splicer to exchange information. When the Application can detects the fusion splicer and receive information from the splicer correctly, it displays the start screen.

**Note: The Maintenance Application is not started completely unless the splicer is verified correctly.**

For further details on the Maintenance Application start screen, see the next page.





**Start screen**

## <Maintenance Application Start Screen>

### Network settings

If you need proxy server settings, click this icon and do the settings.

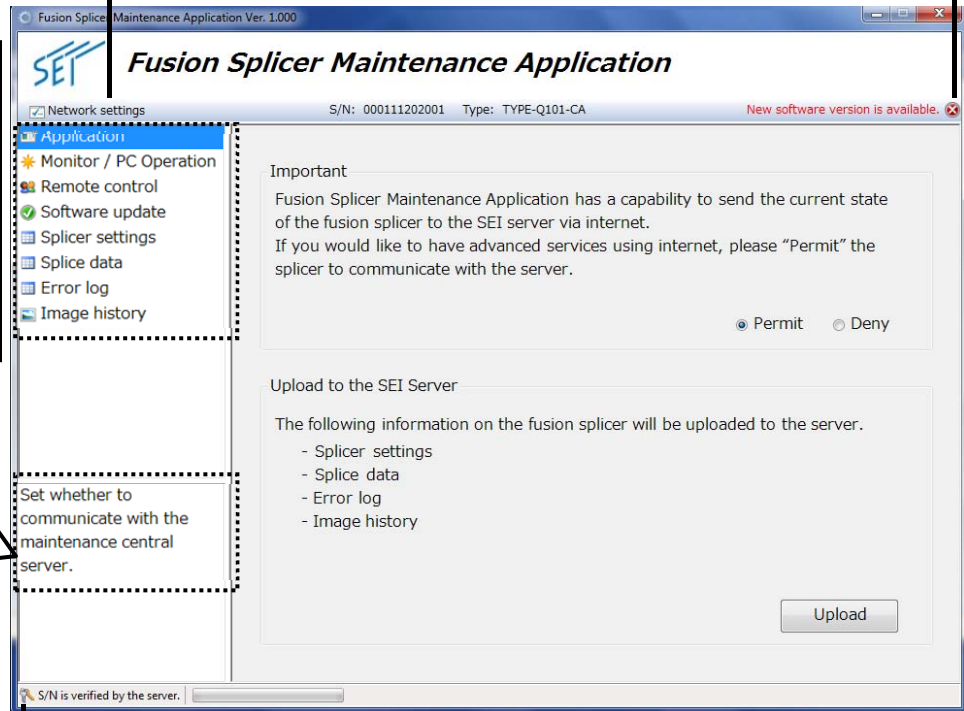
### Fusion splicer software update indicator

-  The current software version is the latest. (No need to update.)
-  New software version is available.



### Side menu bar

When you select a function, the screen of the function appears on the right side screen. (For further details on each function, see page 22.)

If a function is selected, the description of the function is displayed in this pane.

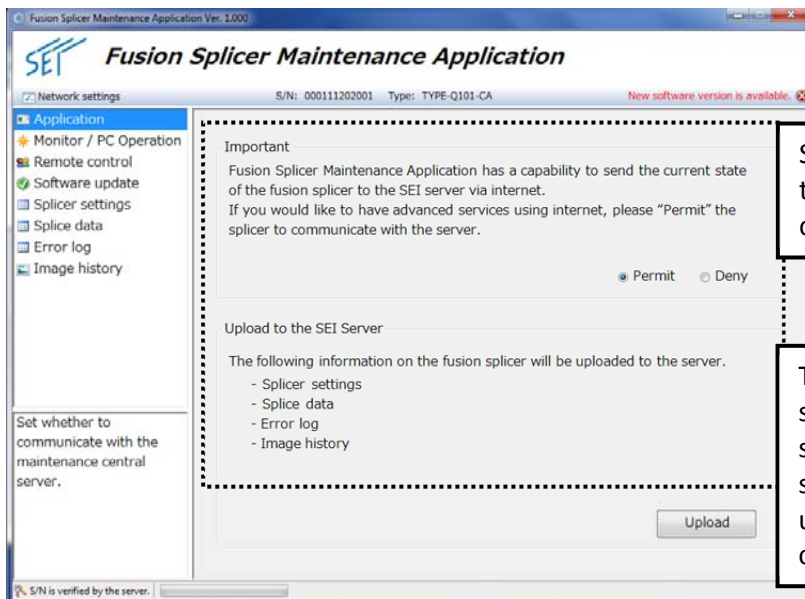


### S/N verification indicator

-  The serial number is verified correctly by the SEI server via internet.
-  The serial number is not verified by the SEI server via internet.

## <IMPORTANT>

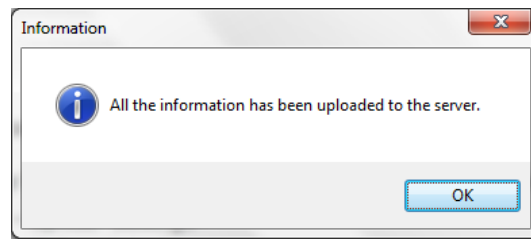
Before updating software on the splicer or taking remote control support by maintenance center, select "Permit", the Maintenance Application can send the current state of the splicer to the SEI server via internet.



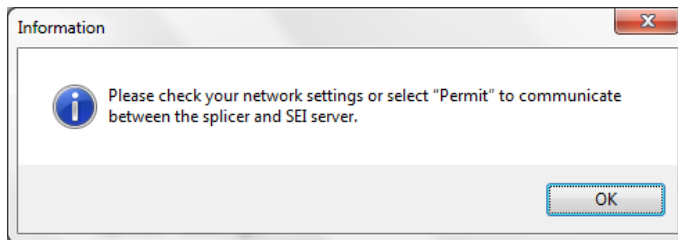
Select "Permit" before updating the software or taking remote control support.

To upload the splicer settings, splice data, error logs and images stored in the splicer to the SEI server, click "Upload". This may be useful for maintenance center that carries out remote control.

If data upload is successful, a pop-up window shown below will tell this to you.



If data upload fails, a pop-up window shown below tell this to you.



## 3-2. Exiting the Maintenance Application

---

To exit the Maintenance Application, Click the "X".



## 3-3. Maintenance Application Functions

The Maintenance Application has various functions. Select a function from the side menu bar.

<Functions>

**Application:** See page 21~22.

**Monitor / PC Operation:** Displays the splicer touchscreen and operate the splicer on the Application.

(See page 24.)

**Remote control:** Connects to the maintenance center via internet and have the splicer diagnosed remotely if it has any problem.

(See page 25~26.)

**Software update:** Updates the splicer software via internet.

(See page 27~28.)

**Splicer settings:** Displays the settings the splicer has, such as splice program, arc parameter and etc.

(See page 29.)

**Splice data:** Displays splice data stored in the splicer memory.

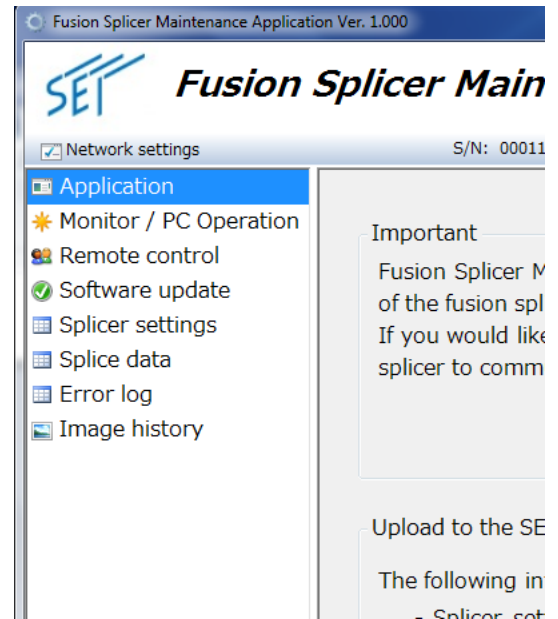
(See page 30.)

**Error log:** Displays error logs stored in the splicer memory.

(See page 31.)

**Image history:** Displays fiber images stored in the splicer memory.

(See page 32.)



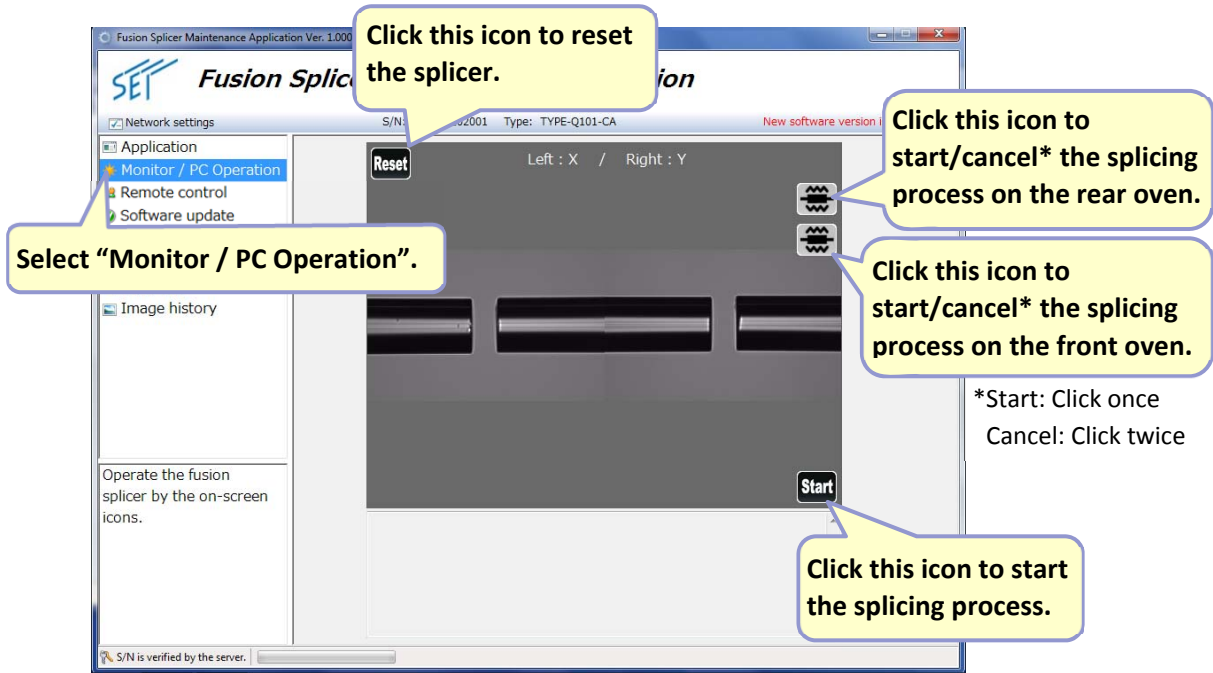


### 3-4. Operating the splicer from the PC (“Monitor / PC Operation” function)

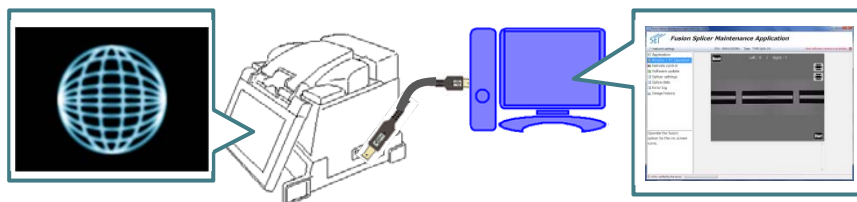
This function enables to have the splicer monitor screen displayed and operate the fusion splicer on the PC. You can perform the splicing and heat shrink processes by clicking the on-screen icons. This function does not use internet communication between the splicer and SEI server.

**Note: Before performing the splicing process, load fibers in the splicer.**

**Before performing the heat shrink process, place the protection sleeve with the splice onto the heat shrink oven.**



**Note: While this function is used, the earth icon appears on the splicer as shown below. If the Ready screen appears on the splicer after resetting it and you would like to continue to use the function, get out of “Monitor / PC Operation” by selecting “Application” and then select “Monitor / PC Operation” again.**



### 3-5. Remote diagnosis by Maintenance center (“Remote control” function”)

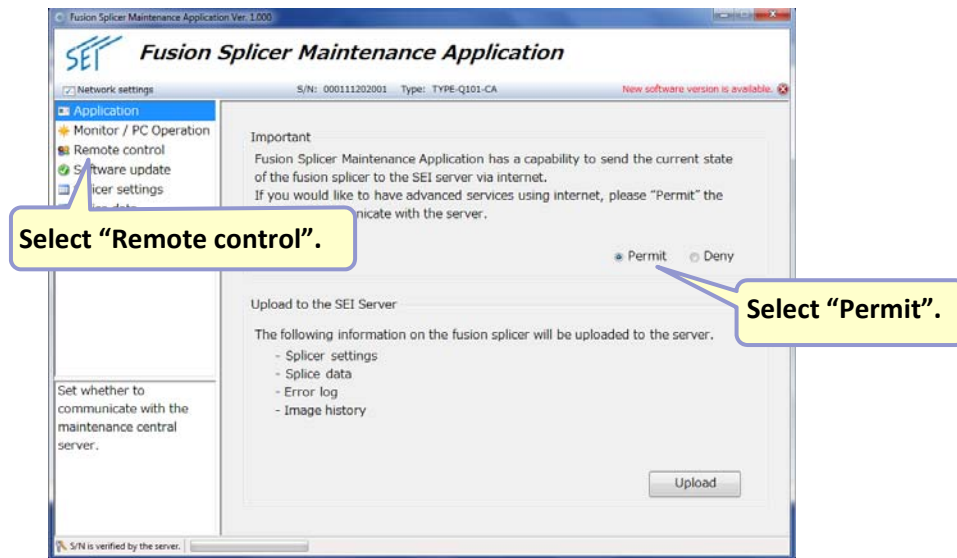
This function enables to connect the fusion splicer to maintenance center via the SEI server and have the splicer diagnosed remotely if it has any problem.

This function uses internet communication between the splicer and SEI server.

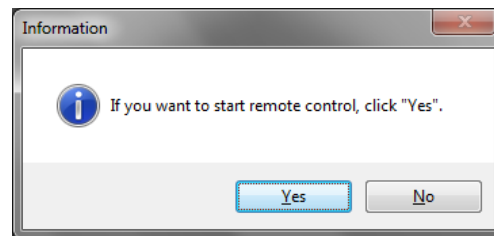
Ensure that “**Permit**” for the Important notice is selected on the start screen. (Refer to page 21.)

Then select “**Remote control**” from the side menu bar.

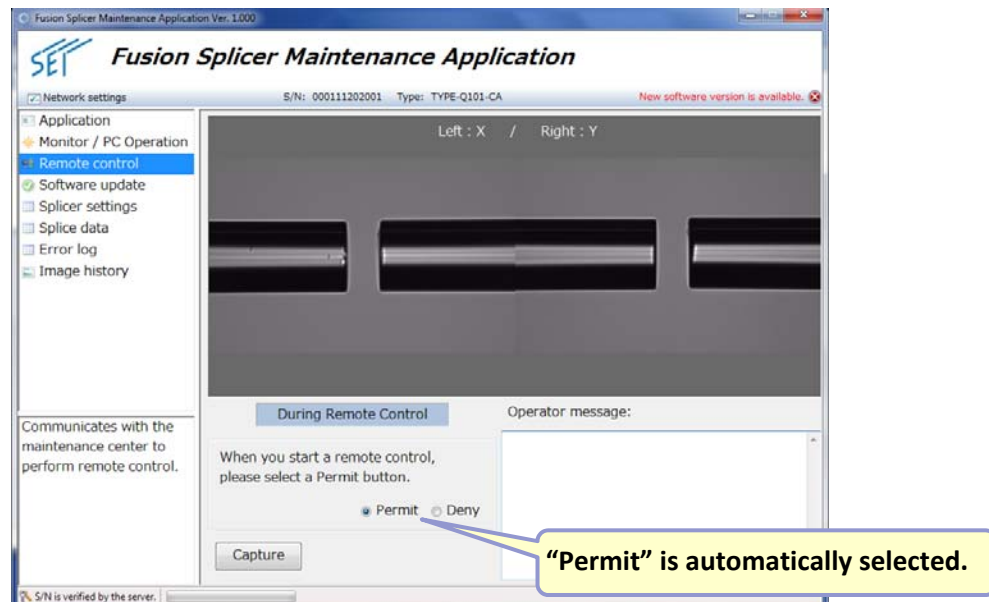
Prior to remote control, load well-cleaned fibers in the splicer.



As soon as selecting “**Remote control**” from the side menu bar, a pop-up window that asks you if you would like to start remote control appears. Click “**Yes**”.



This will allow the splicer to get connected to the SEI server for remote control and “**Permit**” on the Remote control screen is automatically selected.

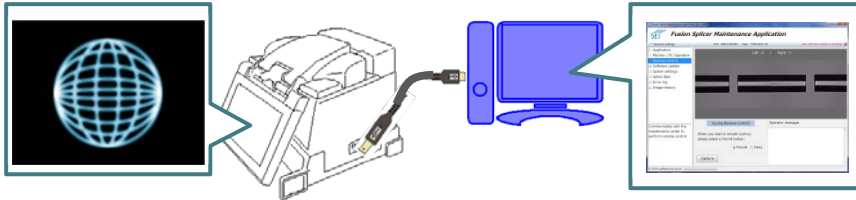


**Note: If you select “Deny” during the remote control, the remote control will be terminated.**

The fiber image observed by the splicer is displayed on the Maintenance Application.

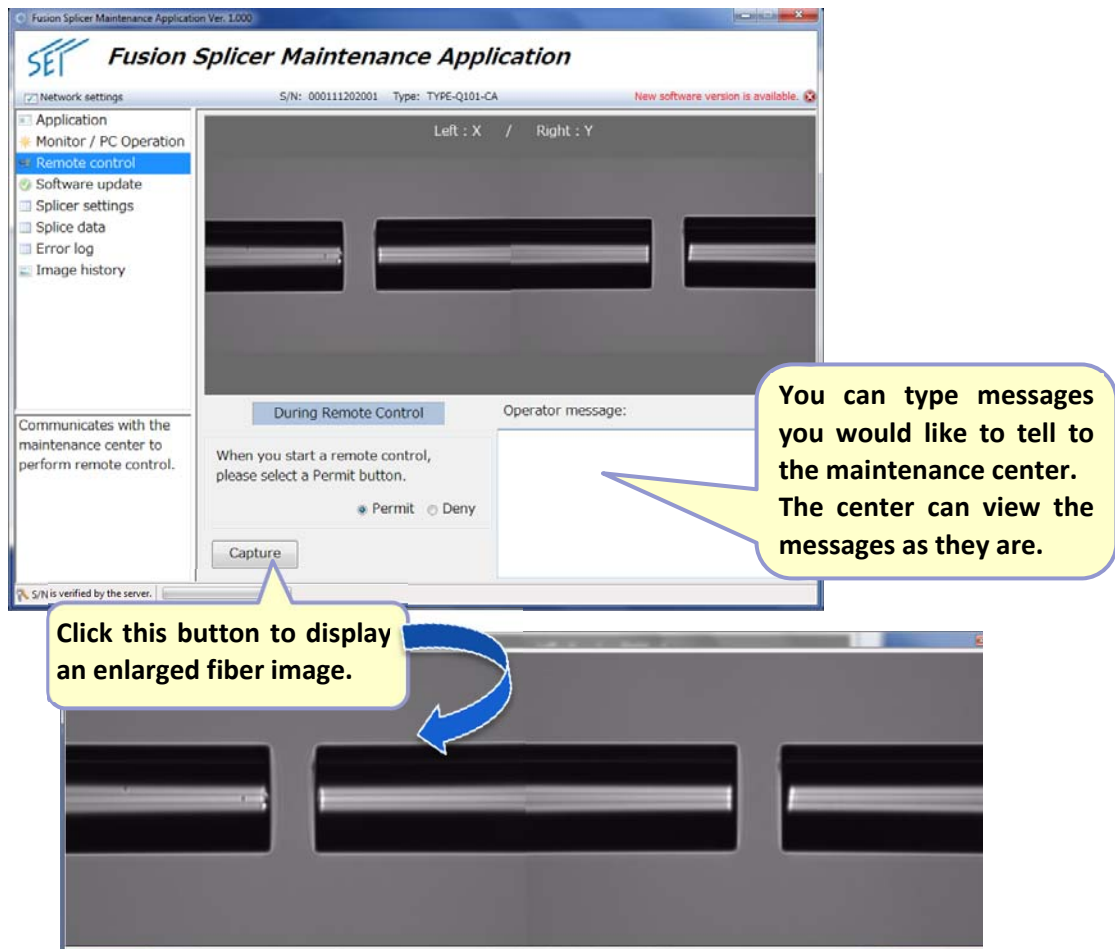
Contact your regional maintenance center (on the phone, via email etc.) to tell them information on the splicer such as serial number, problem found, etc. and that the splicer has been connected to the SEI server. Once the maintenance center accepts the splicer connected to the server and are ready to diagnose it, the screen image of the Maintenance Application will be sent to the maintenance center via the server.

**Note: While this function is used, the earth icon appears on the splicer as shown below.**

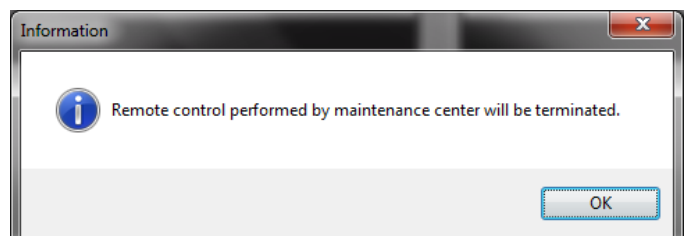


The maintenance center will remotely control and diagnose the splicer. Wait for a while.


**Caution: Do not disconnect the USB and internet connections during the remote control.**



To terminate the remote control, select “Deny”. The internet connection will be disconnected. Or it can also be disconnected by the maintenance center.



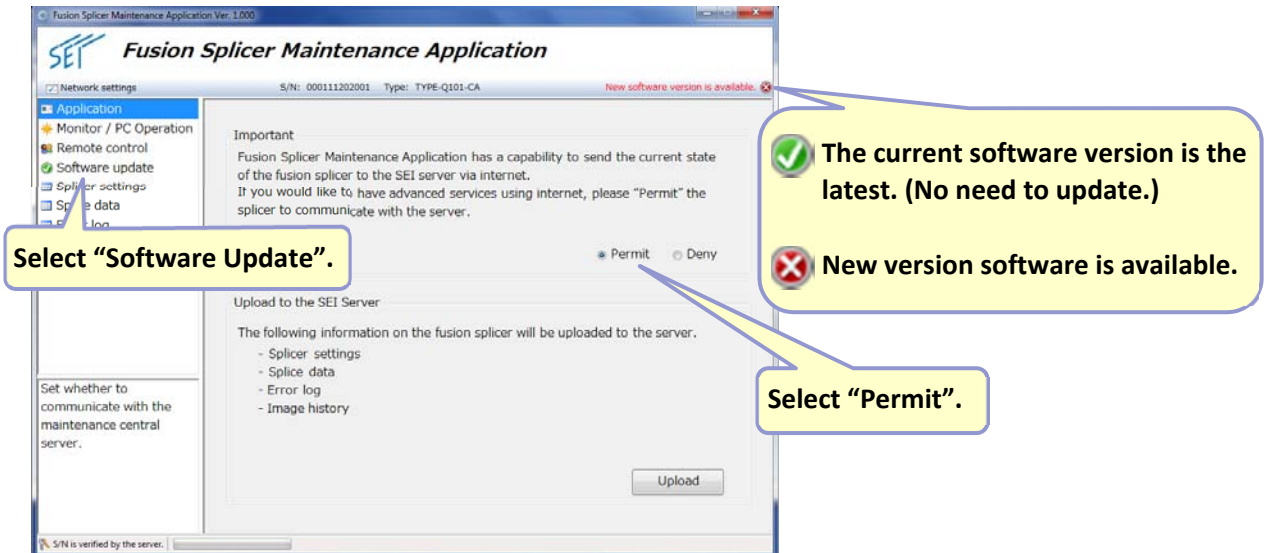
## 3-6. Updating the splicer software (“Software update” function)

When the software update indicator icon is  on the start screen, you can update the software on the splicer.

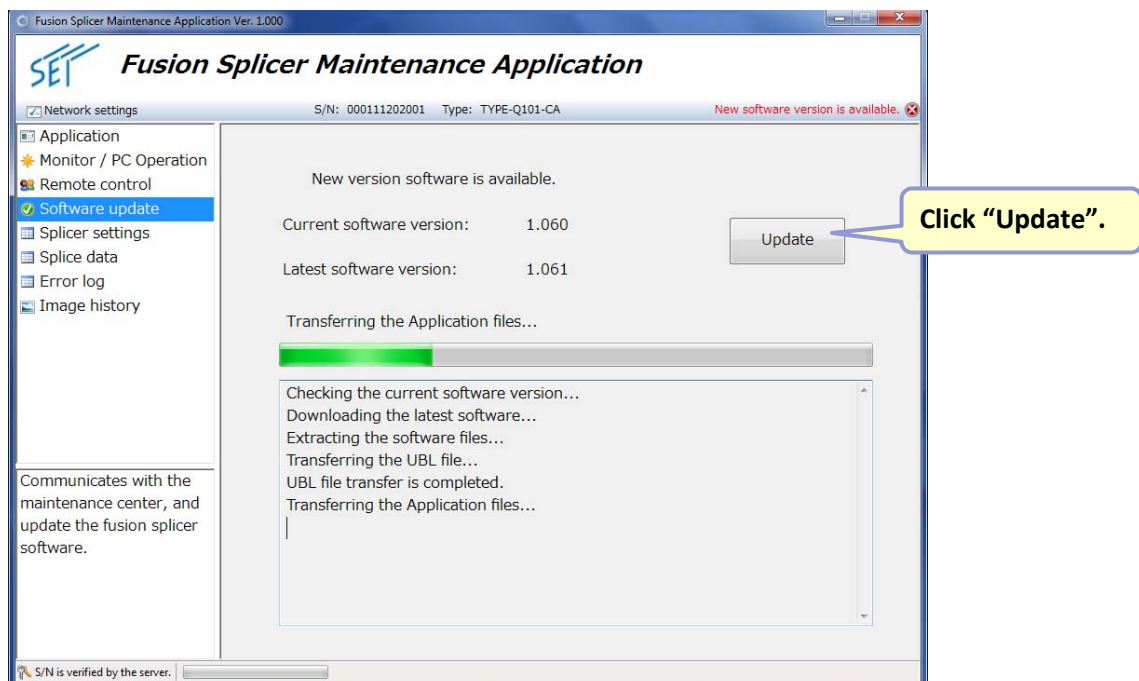
This function uses internet communication between the splicer and SEI server.

Ensure that “**Permit**” for the Important notice is selected on the start screen. (Refer to page 21.)

Then select “**Software Update**” from the side menu bar.

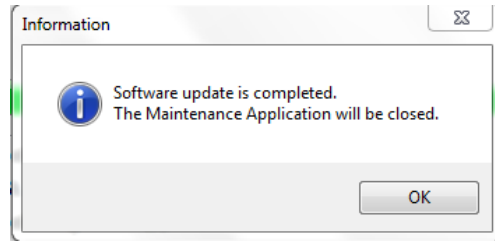


Check the software versions displayed on the Application and click the “**Update**” button to start the update. Wait until the green progress bar moves to the right.



**Caution: Do not disconnect the USB and internet connections during the software update.**

After the software update is completed, the splicer will shut down automatically. A pop-up window that tells you that the Maintenance Application will be closed appears. Click **“Yes”**.

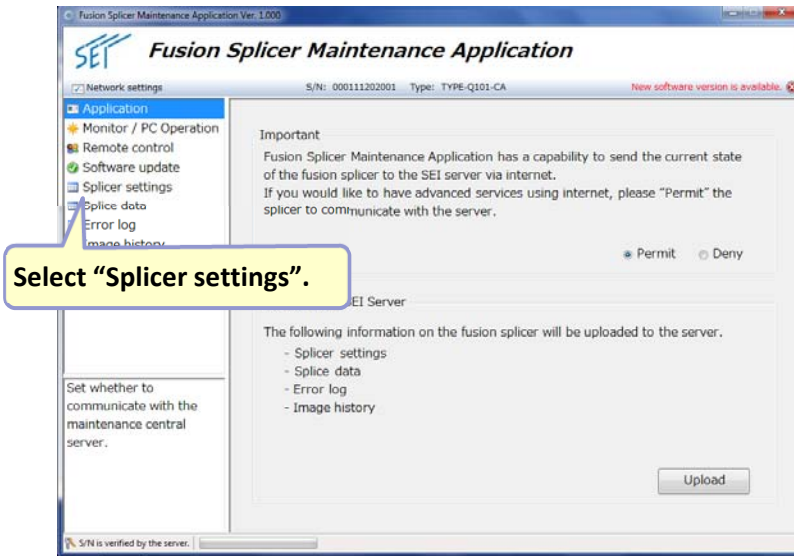


Turn on the splicer and go to **“Information”** from the menu screen. Ensure that the software has been updated.

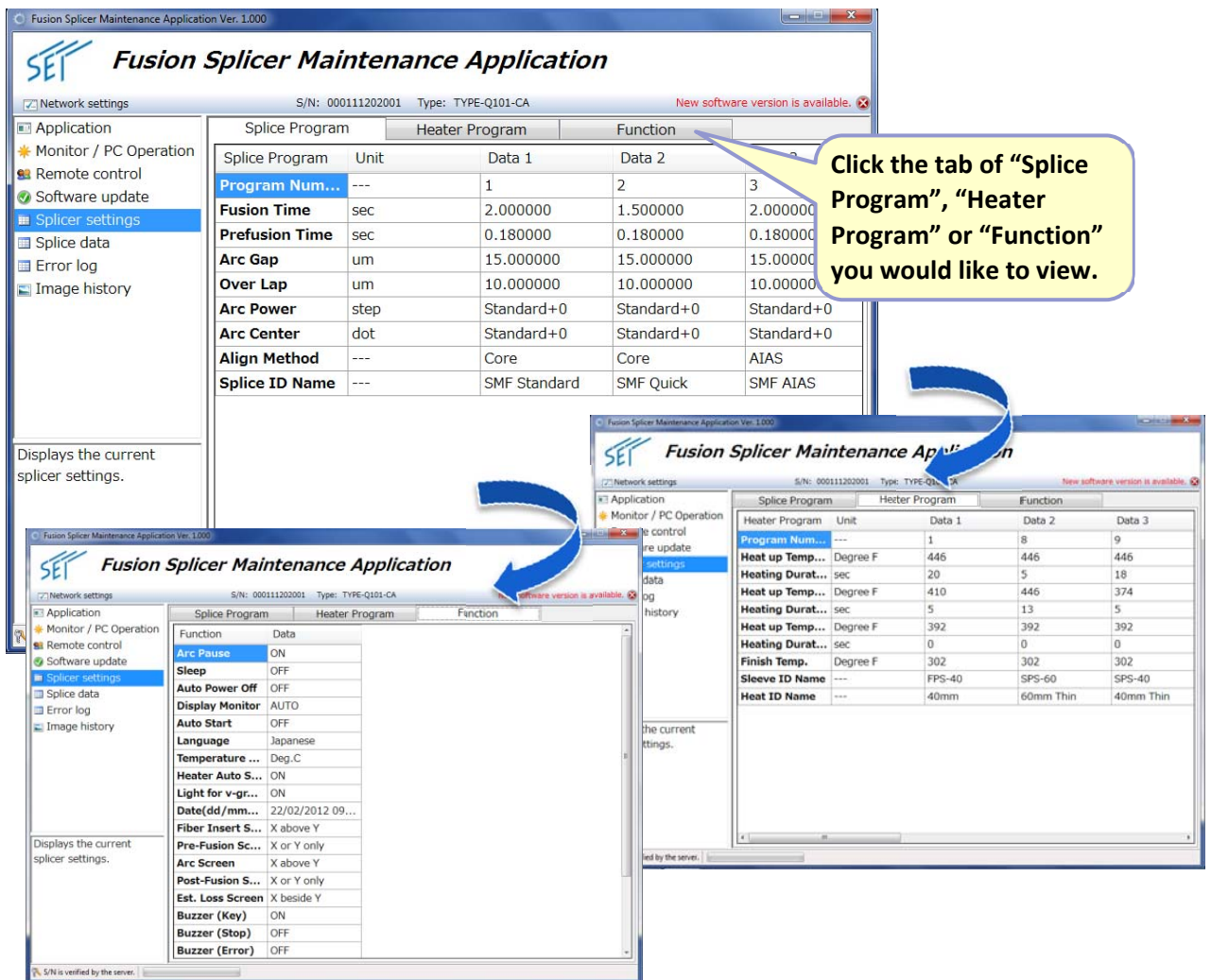
## 3-7. Viewing splicer's settings (“Splicer settings” function)

To view the settings of the splicer connected, select “Splicer settings” from the side menu bar.

This function does not use internet communication between the splicer and SEI server.



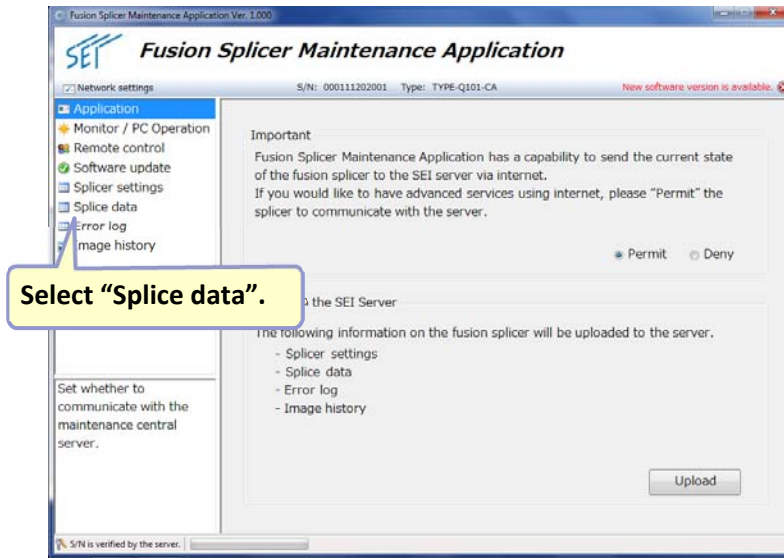
Splice programs/Heater programs/Function settings stored in the fusion splicer are displayed.



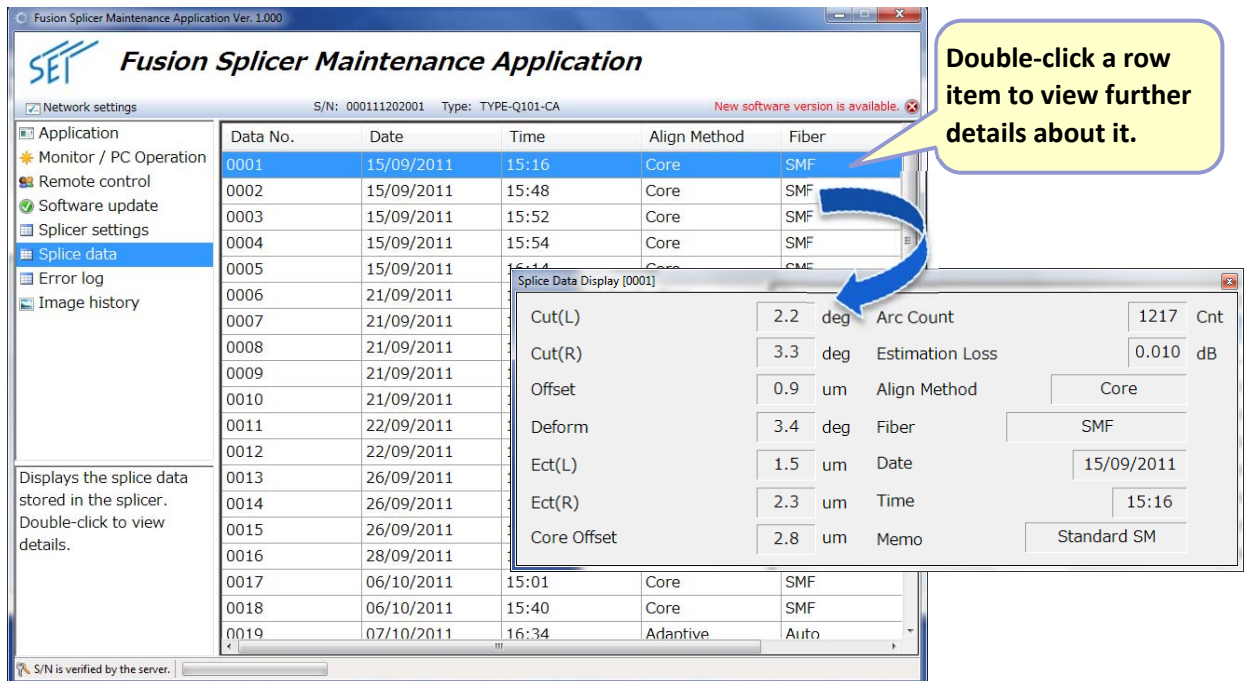
Note: You cannot alter data from the table, it is view only.

### 3-8. Viewing splice data (“Splice data” function)

To view the settings of the splicer connected, select **“Splice data”** from the side menu bar. This function does not use internet communication between the splicer and SEI server.



Splice data stored in the splicer memory are displayed in chronological order. Double-click a row item to view further details about it. Max. 10,000 data points can be displayed. (Max. 10,000 data points can be stored in the splicer memory.)

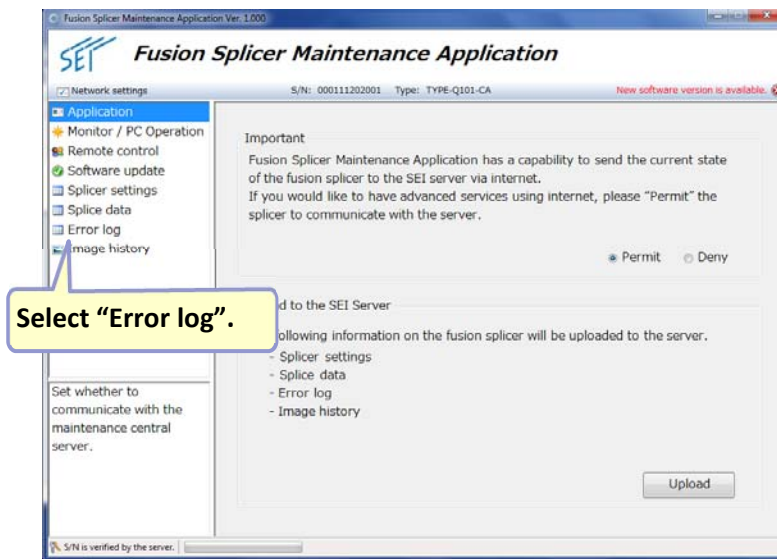


**Note:** You cannot alter data from the table, it is view only.

## 3-9. Viewing error log (“Error log” function)

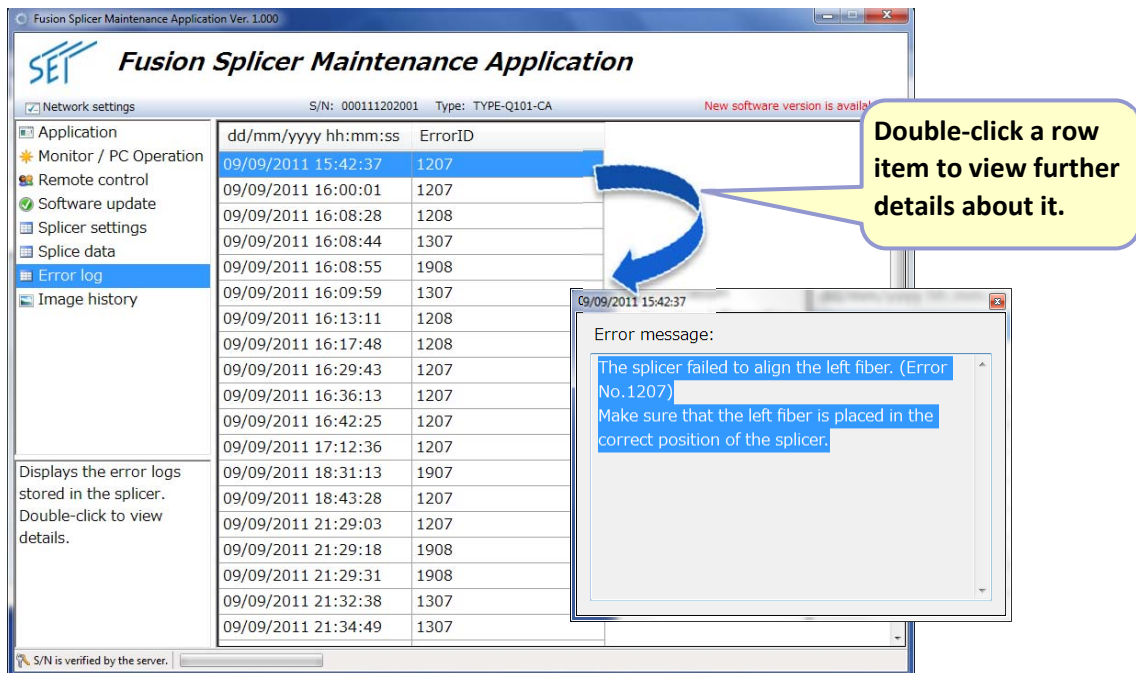
To view error logs stored in the splicer memory, select “Error log” from the side menu bar.

This function does not use internet communication between the splicer and SEI server.



The error logs are displayed in chronological order.

Double-click a row item to view further details about it.



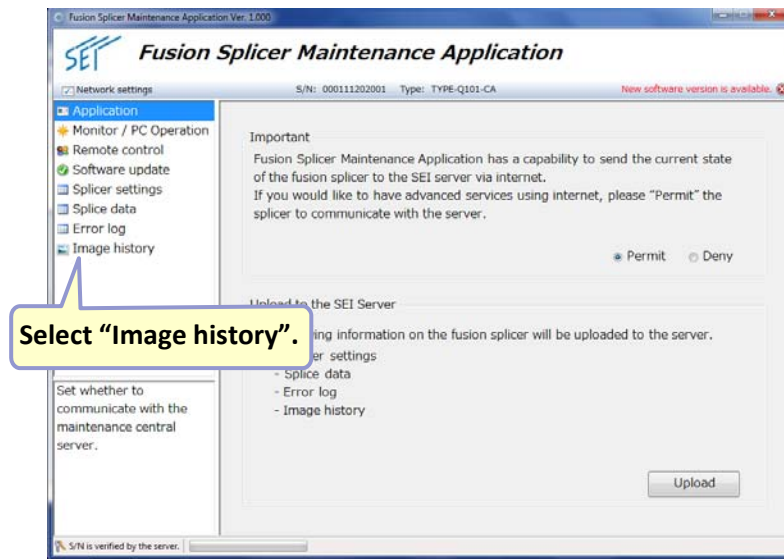
**Note:** You cannot alter data from the table, it is view only.



## 3-10. Viewing stored fiber images (“Image history” function)

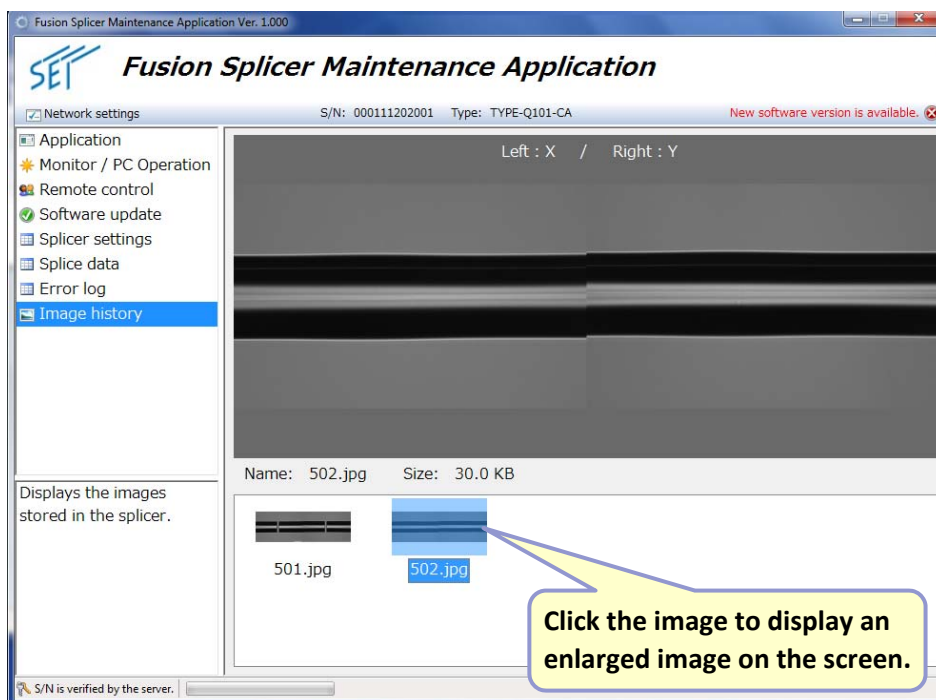
To view fiber images stored in the splicer memory, select **“Image history”** from the side menu bar.

This function does not use internet communication between the splicer and SEI server.



Double-click an image to display the enlarged image.

Max. 64 images can be displayed. (Max. 64 images can be stored in the splicer memory.)



**Note:** Images are view only.

*Tokyo (JAPAN)*  
**Sumitomo Electric Industries, Ltd.**  
**(Global Business Dept.)**  
3-9-1, Shibaura, Minato-ku, Tokyo  
108-8539 JAPAN  
Tel: +81 (0)3 6722 3246  
<http://global-sei.com/fttx/>

*North Carolina (U.S.A)*  
**Sumitomo Electric Lightwave Corp.**  
78 Alexander Drive, P.O. Box 13445,  
Research Triangle park,  
NC27709 U.S.A  
Toll Free No. 800 358 7378  
Tel: +1 919 541 8100  
<http://www.sumitomoelectric.com>

*London (U.K)*  
**Sumitomo Electric Europe Ltd.**  
220 Centennial Park, Centennial Avenue,  
Elstree, Herts, WD6 3SL, U.K.  
Tel: +44 (0)20 8953 8118  
<http://www.sumielectric.com>

*Hong Kong (China)*  
**Sumitomo Electric Asia, Ltd.**  
Tel: +852 2576 0080  
<http://www.seac-cn.com/>

*Shenzhen (China)*  
**SUMIDEN ASIA (SHENZHEN) Co.,Ltd.**  
Tel: +86 755 8270 6880  
<http://www.seac-cn.com/>

*Beijing (China)*  
**SUMIDEN ASIA (SHENZHEN) Co.,Ltd.**  
**(Beijing Branch)**  
Tel: +86 10 6590 8196  
<http://www.seac-cn.com/>

*Shanghai (China)*  
**SUMIDEN ASIA (SHENZHEN) Co.,Ltd.**  
**(Shanghai Branch)**  
Tel: +86 21 6235 1036  
<http://www.seac-cn.com/>

*Wuhan (China)*  
**SUMIDEN ASIA (SHENZHEN) Co.,Ltd.**  
**(Wuhan Branch)**  
Tel: +86 27 8760 6686  
<http://www.seac-cn.com/>

*Bangkok (Thailand)*  
**Sumitomo Electric (Thailand) Limited**  
Tel: +66 (0)2 260 7231 to 5  
<http://www.set-th.com/>

*Singapore*  
**Sumitomo Electric Interconnect  
Products (Singapore) Pte.,Ltd.**  
Tel: +65 6261 3388  
<http://www.seps.com.sg/>

*Dubai (U.A.E.)*  
**Middle East office**  
Tel: +971 4 701 7338 to 7341

*Gurgaon (India)*  
**SEI Trading India Pvt. Ltd. (SETI)**  
Tel: +91 124 4577 470

*Manila (Philippines)*  
**SEI (PHILIPPINES) INCORPORATED**  
Tel: +63 2 811 2755/2756