jems installation on Windows 7, 8 or 10

P. Stadelmann
jems-swiss
Chemin Rouge 15
CH-1805 Jongny
Switzerland
info@jems-swiss.ch

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Contents

1   Introduction

This document describes the procedure to follow in order to:

- Introduction (section 1).
- Extract all files from the jemsWindows7.zip distribution (section 2).
- Set jemsWindows7 tree of folders attributes and security (section 3).
- Set default crystal (section 5).
- Creating a shortcut to start jems (section 4).
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2   Extracting jems from jemsWindows7.zip archive

Program jems must be extracted using the $\boxed{\textbf{Extract All}}$ button or command. Se-
lect file jemsWindows7.zip of the "\Download folder" (Fig. 1) and push $\boxed{\textbf{Extract all}}$
of the "Compressed Folder Tools". The file jemsWindows7.zip contains the whole
jems distribution for Windows OS.

Push $\boxed{\textbf{Browse}}$ to select the destination folder (Fig. 2). Usually folder "\Program
Files" is selected. Any other destination is possible indeed.
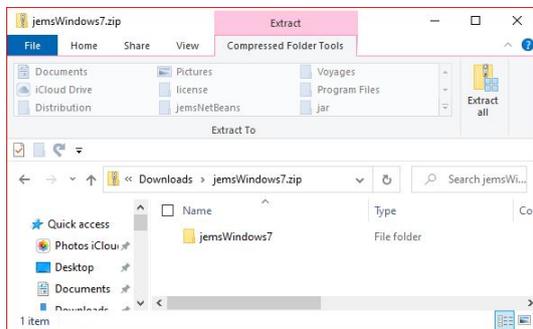

Figure 1: jemsWindows7.zip down-
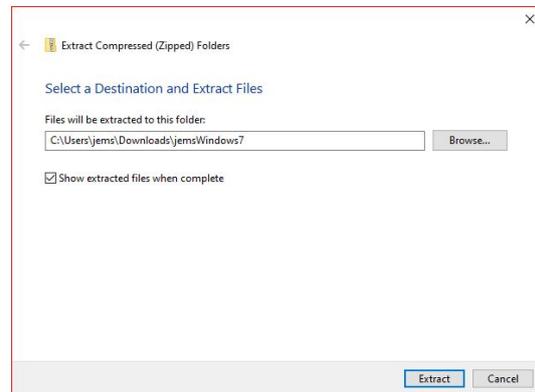loaded in **"\Downloads"** folder.

Figure 2: Browse to select the folder
where jemsWindows7.zip will be ex-
tracted.

Extraction (Fig. 3) can take several minutes depending on the anti virus pro-
gram settings[1]. It is not possible to copy/paste files directly from the .zip
archive since Windows OS will **not** copy java VM and related files.

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[1]When naming the extraction folder jemsWindows7 the whole tree of jems folders is placed
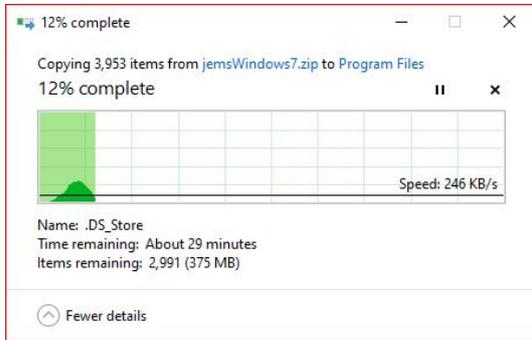in jemsWindows7.

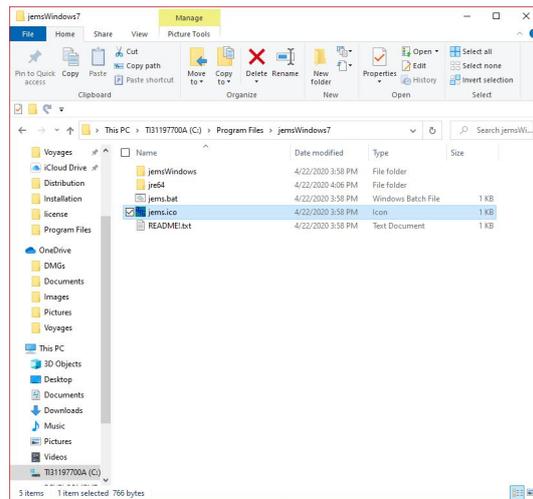Figure 3: jemsWindows7.zip files are extracted ″*Program Files*″.

Figure 4: Files that are extracted to ″*Program Files*″.

Figure 9 shows the files extracted in ″*Program Files**jemsWindows7*″.

1. jemsWindows: folder containing the jems files (jar, data, help,..).

2. jre64: javaVM for 64 bits Windows OS. It is only extracted using **Extract all** button or popup menu command.

3. jems.bat: the batch file to start jems (a copy of jems64.bat).

4. jems.ico: jems icon.

5. jems64.bat: a batch file for 64 bits OS.

6. README!.txt: small explanation of the purpose and use of jems.bat.

Usually administrator rights are required when extracting to ″*Program Files*″.

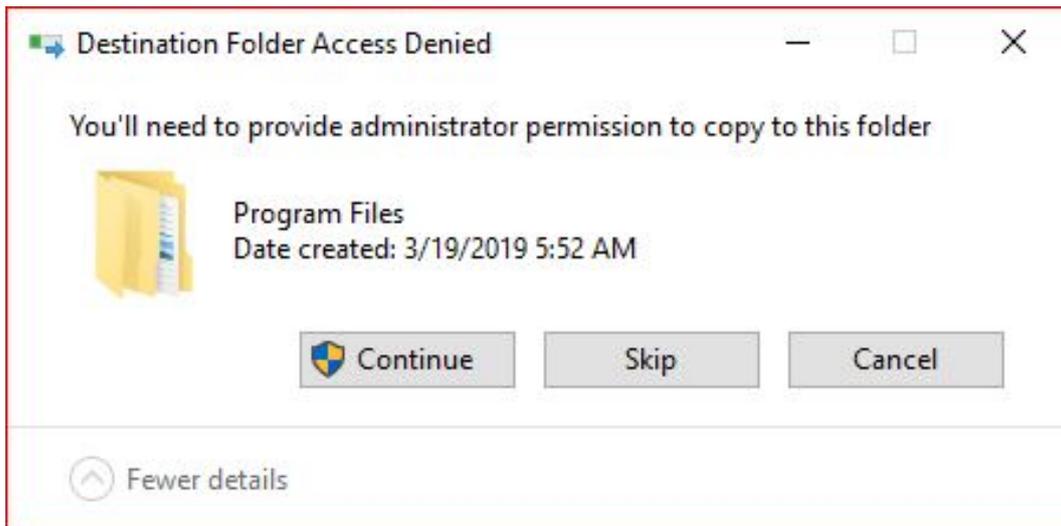Figure 5: Administrator rights may be required.

3 Setting "\Program Files\jemsWindows7" folder properties

After extracting jems files to "\Program Files\jemsWindows7" it is necessary to change the "Security" and "Read/Write" attributes of this folder in order to make jems available to all computer users. This is provided by setting the properties of the folder. Push the Properties (Home tab).

Select the **Security** tab and edit the permissions (Fig. 6). Set permission **Modify** for the users (or any other group of people) and push the OK (Fig. 7). Then select the **General** tab and **uncheck** the Read-only checkbox (Fig. 8). Finally push Apply and when completed OK to close the properties dialogue.
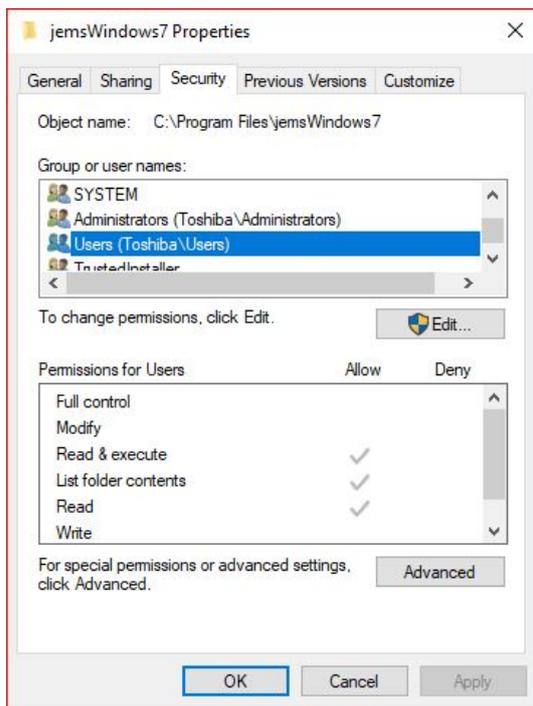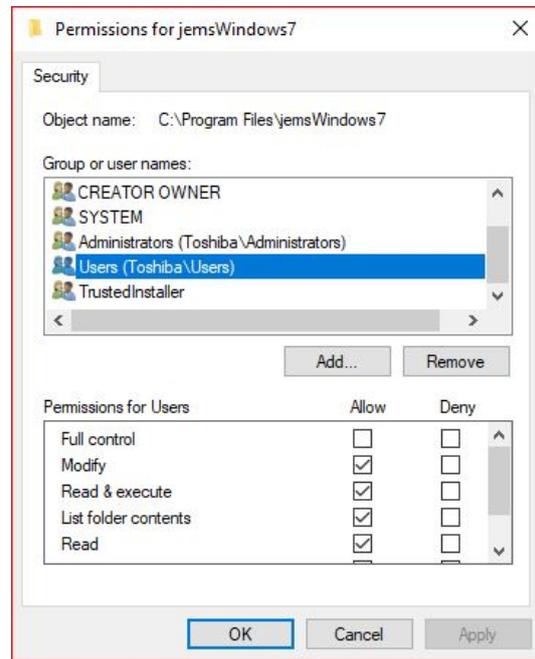
Figure 6:

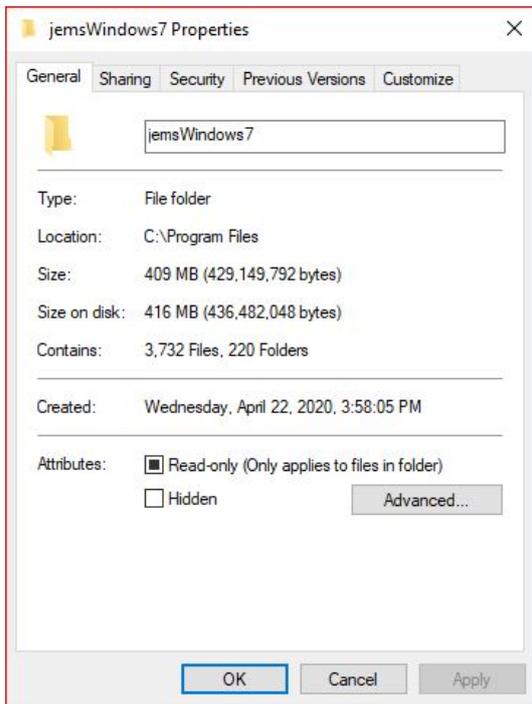Figure 7: Files that are extracted to *"\Program Files"*.

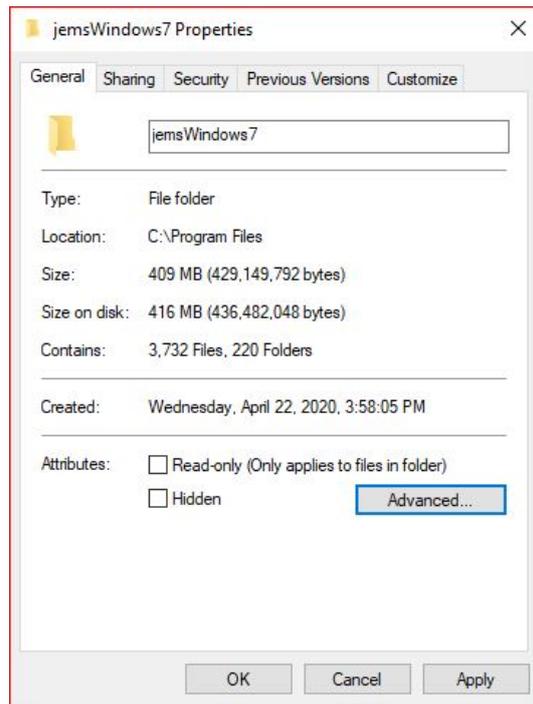Figure 8: General tab of the Properties dialogue.

Figure 9: Uncheck the Read/Write.

When the attributes (Read/Write) or security (Modify) are not set properly the following message (Fig. 10) is displayed running jems (using jems.bat).
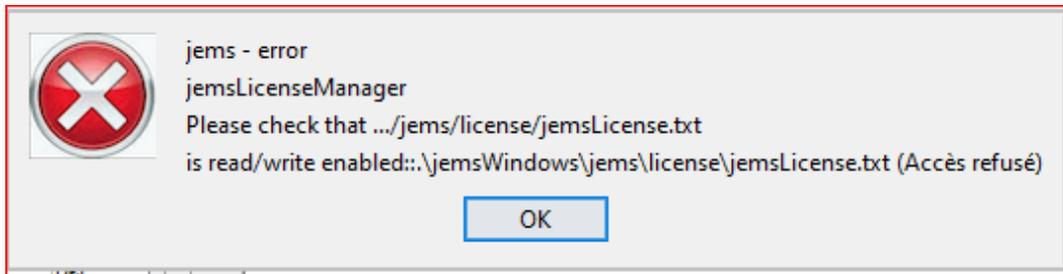

Figure 10: Read/write error message (see section 6)

4 Install jems batch file (jems.bat) on the desktop

On Windows OS jems is started using the batch file *"jems.bat"*. A shortcut of the batch file should be placed on the desktop and its default icon replaced. Create a shortcut and move it to the desktop (Fig. 11). To change the icon of the shortcut edit its *"Properties"* and push ⃞Change icon...⃞.
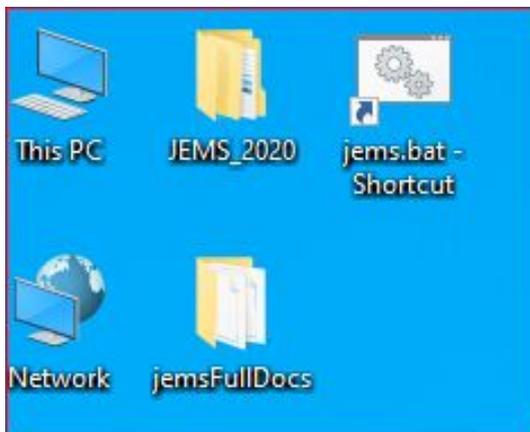

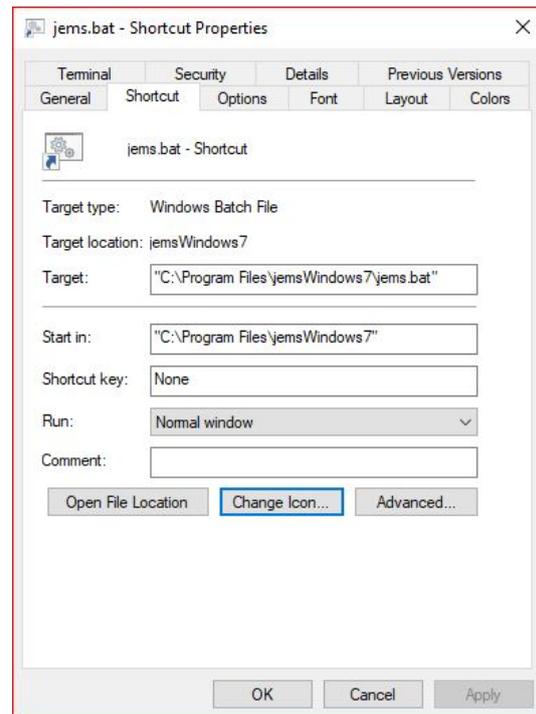Figure 11: Create and put a shortcup of jems.bat on the desktop.

Figure 12: Change the icon of jems.bat shortcut.

Push ⃞Browse⃞ (Fig. 13) to select the jems icon (in folder *"\Program Files\jemsWindows7"*). Push ⃞OK⃞ to end the selection. Finally rename the shortcut (Fig. 15).

Figure 16 shows the DOS command (64 bits) that starts jems. The java options are:

- -Xms2048MB starts java VM with a RAM memory size of 2048MB.

- -Xmx4096MB allows the RAM memory in use to grow to 4096MB.

- -Xss16M sets the stack size to 16MB.

- -Djava.ext.dirs defines the paths to the libraries (archives). Note the use of *"..."*.
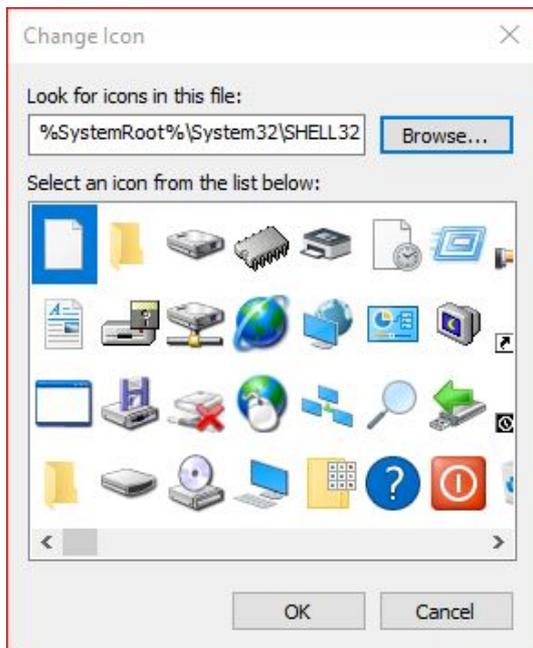
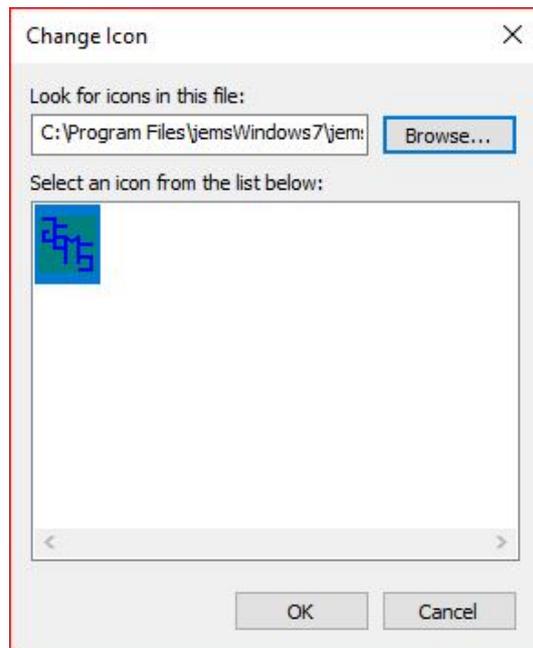Figure 13: Create and put a shortcup of jems.bat on the desktop.

Figure 14: Select jems icon.

Figure 15: Shortcut renamed to **jems.bat**.

- -jar defines the path to jems executable (jar archive, i.e. byte code of jems, not yet compiled).

The memory allocating options -Xms and -Xmx should not be set to approximately $\frac{1}{4}$ and $\frac{1}{2}$ of the available RAM memory. To change these values either edit the jems.bat batch file found in "\Program Files\jemsWindows7" or use jems *Preferences* dialogue. More options can be added to javaVM, for example -verbose (see Fig. 17). Note that the verbose option creates very large logs. More java VM options are described on:
https://www.oracle.com/technetwork/java/javase/tech/vmoptions-jsp-140102.html.

Any startup problem will be shown in this log. Appending "*>> log.txt* will generate a .txt log file (Fig. 18). In case of trouble save it and forward it to jems-swiss@gmail.com.
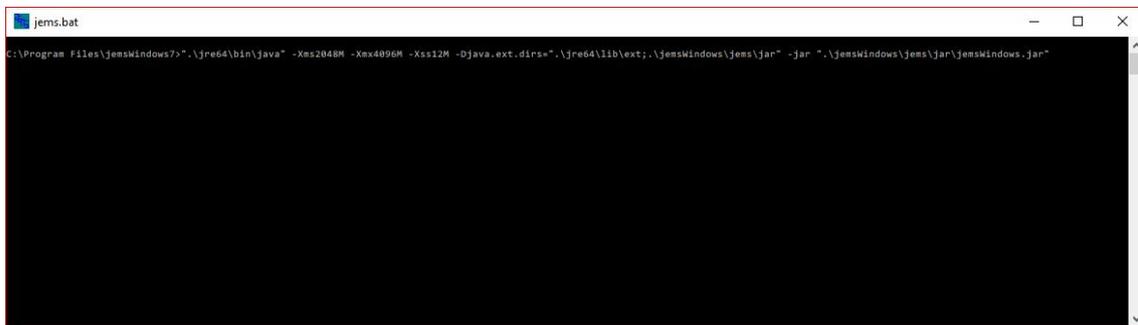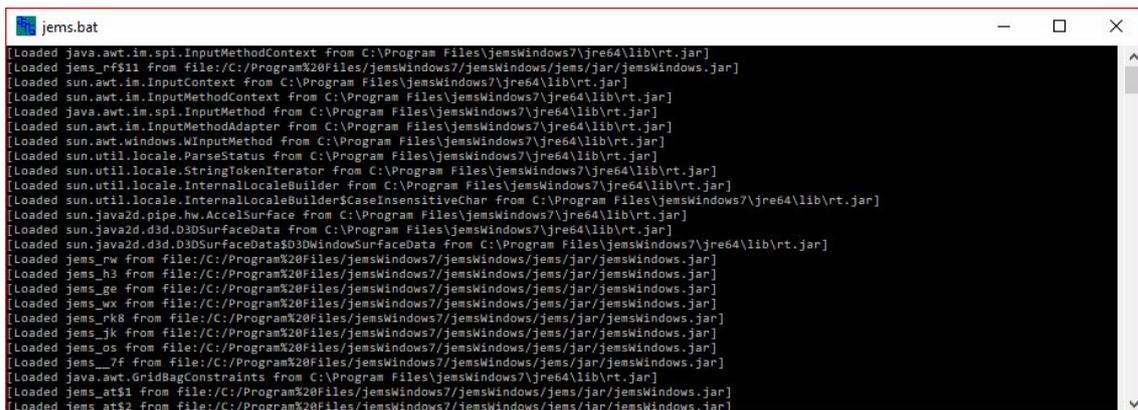

Figure 16: DOS shell execution log.

Figure 17: DOS shell execution log with java -verbose option.

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Figure 18: Appending ″>> *log.txt* to generate a log file.

5 Default crystal

When the default crystal (i.e. the crystal file that opens when jems is started) is not defined or wrongly set the following message is displayed (Fig. 19). The *Default crystal* is set using the **Miscellany** tab of the **Preferences** dialogue (Fig. **??**).

After selecting the default crystal do not forget to crosscheck **Save** checkbox before closing the dialogue.
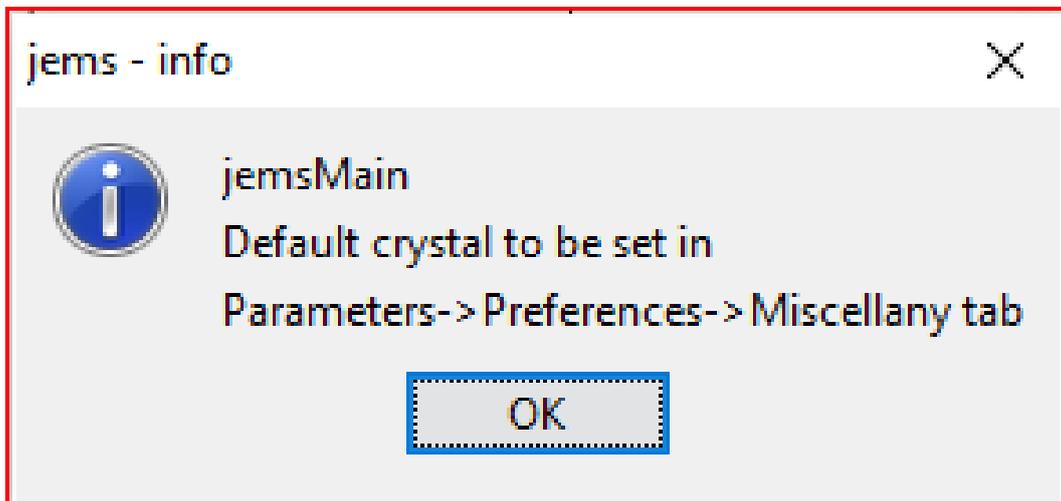

Figure 19: Default crystal error message.

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6 Requesting a license code

Start jems. Activate menu item **License** of menu **Help**. The **License** dialogue contains 3 tabs (Fig. 20):

1. **License** displaying the *Host*, *Unique ID*, *Serial* and *License* text fields.

2. **Request** to send the license request.

3. **Version** displaying jems version.

The *Host* and *Unique ID* text fields show the hostname and unique ID of the computer. Some PC manufacturers do not set the *Unique ID*. The *Serial* and *License* text fields are generated on request (email). These 4 strings are case sensitive.

To request a license code select the **Request tab** (Fig. 21) and click on the *Request* button to open the dialogue (Fig. 22).
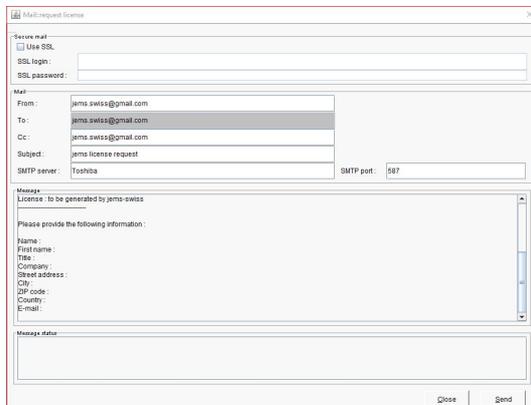
Figure 20: The **license dialog** of menu **Help**. The *License* text field is generated using the *Host* , *Unique ID* and *Serial*.
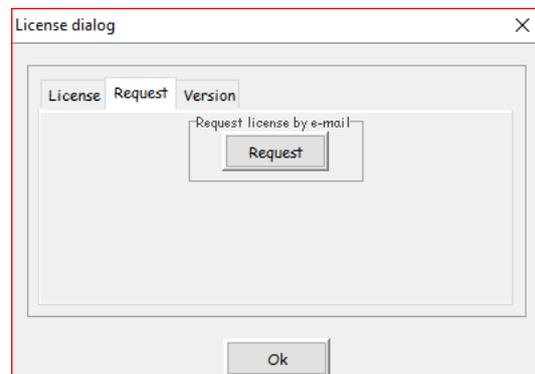
Figure 21: Requesting a license code by email.

The *Serial* and *License* are generated by **JEMS-SAAS**. It is necessary to fill the following fields before sending the request:
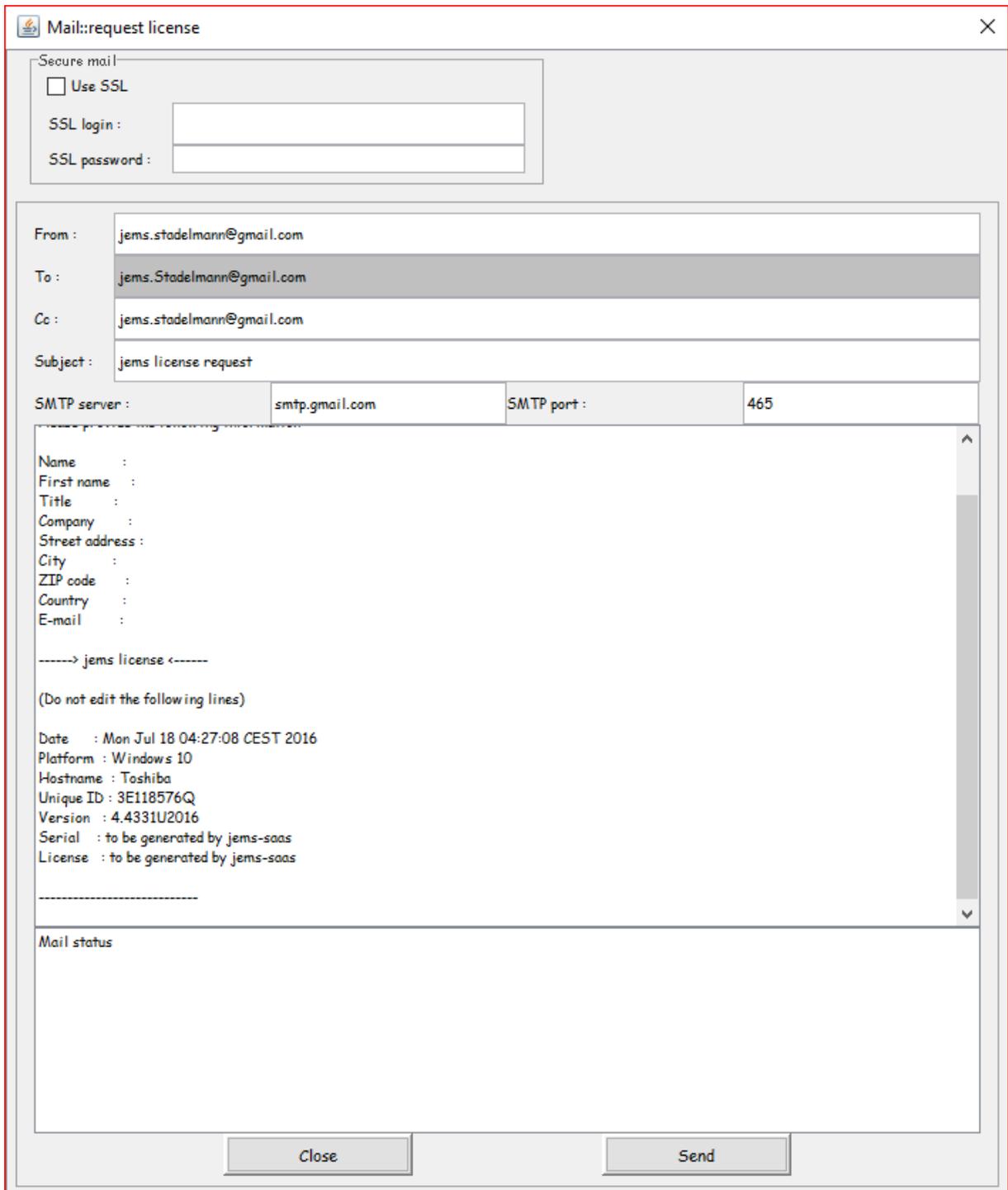
Figure 22: Requesting a license code using menu item *License* of menu *Help*.

- **From :** your email address.

- **Cc :** your email address (to receive a copy of the email).

- **SMTP server :** the *S*mall *M*essage *T*ransfer *P*rotocol server. Ask your IT administrator.

- **SMTP port :** the *S*mall *M*essage *T*ransfer *P*rotocol port. Ask your IT administrator.

- **Name :** your family name.

- **First name :** your given name.

- **Title :** your title.

- **Company :** your company.

- **Street address :**, **City :**, **ZIP code :**, **Country :** your full address (for DVD delivery when asked).

- **E-mail :** email address (to whom the license code must be sent).

The **SMTP** and **From** text fields can be permanently defined using the **Mail** tab of the jemsPreferences dialogue (Fig. 23). Before closing the dialogue set the **Save** checkbox.

When the PC is behind a Firewall, it may be necessary to use SSL mails (**S**ecure **S**ocket **L**ayer). Your email login and password are required (Figs 24 and 25). Figure 26 shows the message displayed after entering a valid license code.

6.1 Copy Paste

It is also possible to copy/paste the *Name :*, ..., E-mail : text area to your regular email program.
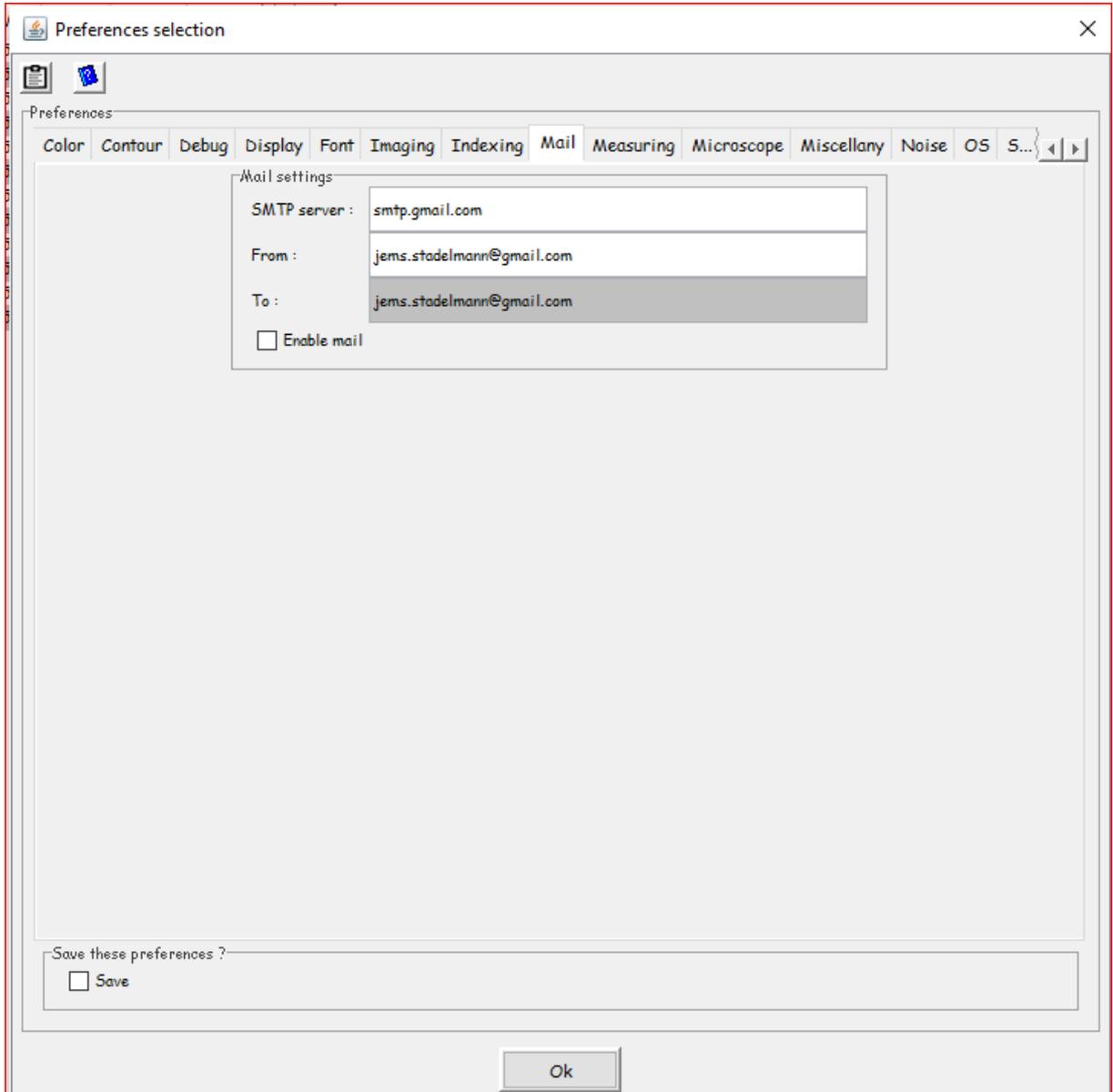
Figure 23: Setting the **SMTP** and **From** informations using the **Preferences** dialogue.
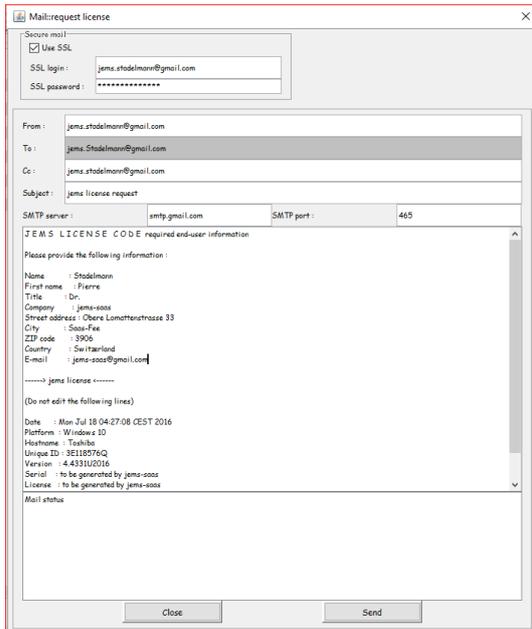
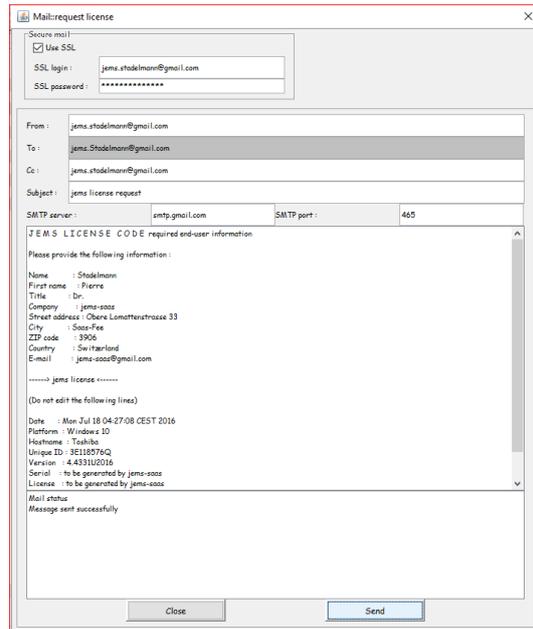Figure 24: Using SSL requires to enter your SSL email login and password.

Figure 25: The *Message sent successfully* is displayed to confirm sending.

7 Remarks

7.1 WiFi internet connection

WiFi internet connection using DHCP attributes a dynamic hostname to the PC. Since jems license code is based on its static hostname, it is necessary, when both internet and jems need to run simultaneously, to stop WiFi, start jems and then restart WiFi.

This is also necessary when requesting the license code:

1. Stop WiFi.

2. Start jems, fill the request license form.

3. Start WiFi.

4. Send the form (either directly from jems when allowed by the firewall, or copy/paste the form in your regular mail program).

Figure 26: Message displayed on top of jems main frame when a valid license code is provided.

7.2 Locale

jems uses principally English for labels, tiptexts, etc. Since Java VM detects the local settings ("Locale") it is necessary in most countries to either install a English version of DOS or to define the local settings ("English" language and "US" country). This is done at run time.
The DOS batch file jems.bat starting jems should contain Locale for US English. This is specified as 2 java VM options:

-Duser.country=US -Duser.language=en

With these options the batch file used to start execute jems (jems.bat) should look like:

```
".\jre64\bin\java" -Duser.country=US -Duser.language=en -Xms2048M -Xmx4096M
 -Xss12M -Djava.ext.dirs=".\jre64\lib\ext;.\jemsWindows\jems\jar"
 -jar ".\jemsWindows\jems\jar\jemsWindows.jar"
pause
```