



Software Localizability In Windows

Houman Pournasseh
Lead Program Manager

Microsoft[®]

Agenda



- **Definitions**
- Goals and Challenges
- Rules and Guidelines
- Pseudo-localization
- References and resources

Definitions



- **Globalization:** The process of designing and implementing source code so that it can accommodate any local market (locale) or script.
- **Localizability:** Designing software code and resources such that resources can be localized for any local market (locale) without changing the source code.
- **Localization:** The process of adapting a product (including both text and non-text elements) to meet the language, cultural, and political expectations and/or requirements of a specific local market (locale).



Goals and Challenges



- Goals:
 - Preventing the localization to break the functionality
 - Ease the localization effort and cost
- Challenges:
 - Localizability defects are uncovered late in the process
 - Developers are focused on their primary language
 - Developers use coding “tricks” to have cool looking apps and save time/work.

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Unbreakable Rules



- All localizable resources should be placed in standard resource files
- Do not place non-localizable strings in resource file
- Do not reuse string resources
- Use the same resource identifiers throughout the life of a product

String manipulations



- Avoid composite strings that are built at runtime:

To avoid:

```
t1_text = "Not enough memory to";
t2_text = "the file";
v1_text = "open";
v2_text = "copy";
v3_text = "save";
...
text = t1_text+" "+v2_text+" "+t2_text+" "+filename+".";
```

Preferred:

```
t1_text = "Not enough memory to open the file %s.";
t2_text = "Not enough memory to copy the file %s.";
t3_text = "Not enough memory to save the file %s.";
```

String manipulations (cont.)



- Avoid strings with replacing arguments:

" Not enough memory to %s %s."

English: Not enough memory to **open** *[file]*.

Finnish: Liian vähän muistia tiedoston *[file]* **avaamiseen**.

- When variables are necessary use Unique names:

English: " Not enough memory to %1 the %2."

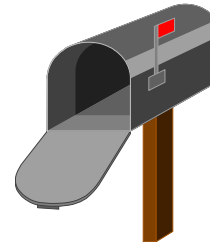
Finnish: "Liian vähän muistia tiedoston %2 %1."

- Win32: `FormatMessage`
- .NET framework: `String.Format`

Images and Icons

- Avoid text in graphics
- Avoid gender and ethnic stereotypes
- Avoid cultural specific examples
- Avoid body parts and gestures

To Avoid



Preferred



UI Controls

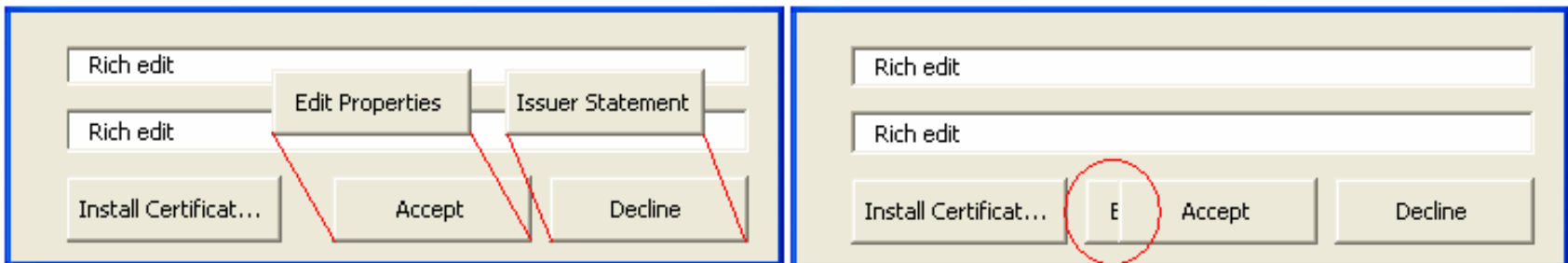


- Avoid using UI controls within sentences

Reset 'Fail Count' to zero after day(s).

Fehlerzähler nach Tag(en) auf Null zurücksetzen.

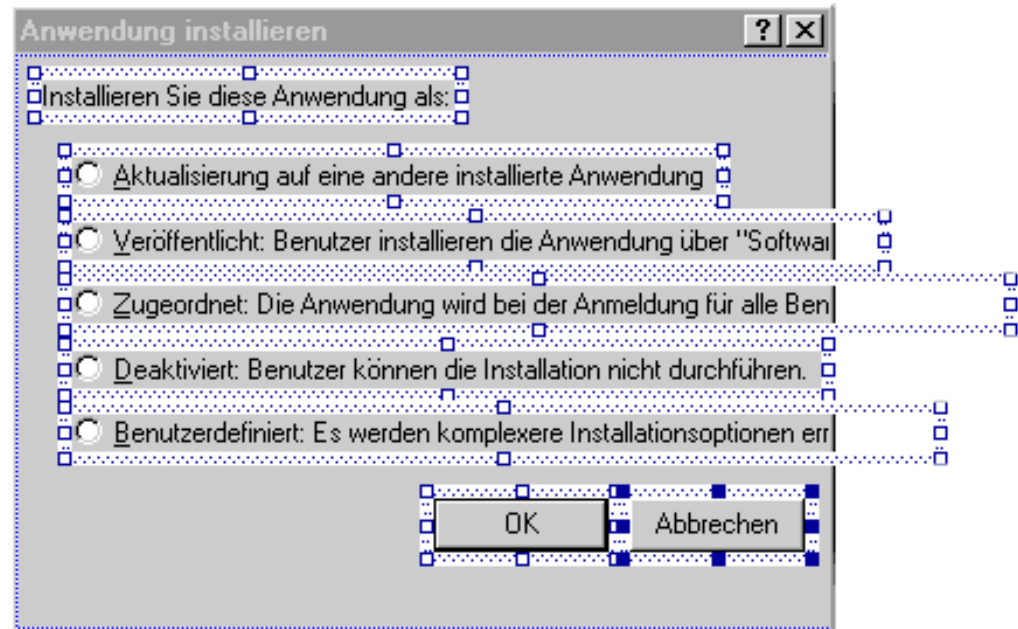
- Avoid hidden or overlapped controls



Element resizing



- Leave space for text expansion both vertically and horizontally



Text expansion in HTML dialogs



- Design so Entire Dialog Consists of Tables:

```
<body>  
  <!-- Use one main table -->  
  <table width=100%>  
    <... can contain other tables ...>  
  </table>  
</body>
```

- Avoid Fixed Width Items
- Each Control Should be in a Separate Cell
- Allow Text Wrapping - do not use “nowrap”
- Separate Check Boxes and Radio Buttons from Labels

Text expansion in HTML dialogs

(cont.)



Find what:

Match whole word only

Match case

Direction

Up Down

Find Next

Cancel

Find what:

Match whole word only

Match case

Direction

Up Down

Find Next

Cancel

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Pseudo-localization



- Helps to push localizability testing up-stream
- Helps to uncover defects that only appear after translating the software



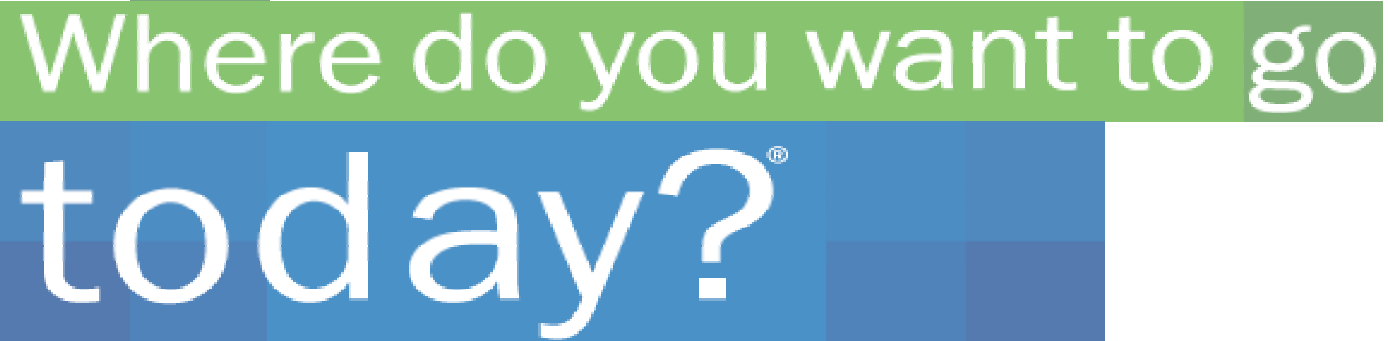
Resources



- Developing International Software for Windows 95 and Windows NT
- Windows 2000/XP Globalization:
<http://www.microsoft.com/globaldev>
- E-Mail aliases:
drintl@microsoft.com
gdhelp@microsoft.com



Questions?



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today?

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