



# User-centered Design Guidelines for Online Help

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# Guidelines we'll discuss

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- ▶ Formatting and writing
- ▶ Linking
- ▶ Navigational tools
- ▶ Embedded and context-sensitive help
- ▶ Printed documentation

# Are we wasting our time?

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- ▶ Do people use help?
- ▶ Is help useful?

# Users use help



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**Fact:** 20% of users admit to using help daily.  
59% of users admit to using help monthly.

- Martin et al. (2005)



# Help does help



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**Fact:** Users are more successful if they use help.

- Renkl (2002) , Wood (2001), Wood & Wood (1999)

**Fact:** Users learn from help.

- Renkl (2002) , Wood (2001), Wood & Wood (1999)

# Formatting and writing guidelines

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- ▶ What font and font size work best?
- ▶ How do users use help?
- ▶ What are they looking for?

# Use 12pt or 14pt type



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**Fact:** Users have trouble reading text below 10pt.

- Bernard, et al. (2003 and 2001d), Fukuda & Bubb (2003), Ownby et al. (2003), Schmidt, et al. (2003)

**Fact:** Users (esp. 65+) prefer 12pt or 14pt.

- Bernard, et al. (2003 and 2001d), Fukuda & Bubb (2003), Ownby et al. (2003), Schmidt, et al. (2003)

# Use Arial



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**Fact:** Users prefer Arial over Verdana and Tahoma, especially Arial 14pt.

- Bernard, et al. (2001a, 2001b, 2001c)



# Font comparison

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## Arial

After Estonia regained independence in 1991, a public debate ensued on the chosen English language name for Estonia. Many Estonians tend to identify more with Northern Europe, and would prefer the country to have a more Nordic-sounding name. The most widely-known of these alternative English language names is "Estland."

## Verdana

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## Tahoma

After Estonia regained independence in 1991, a public debate ensued on the chosen English language name for Estonia. Many Estonians tend to identify more with Northern Europe, and would prefer the country to have a more Nordic-sounding name. The most widely-known of these alternative English language names is "Estland."

- [www.wikipedia.org](http://www.wikipedia.org)

# Provide quick answers



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**Fact:** Users focus on minimizing effort rather than maximizing learning.

- Alevan, et al. (2006), Baker, et al. (2004)

**Fact:** Users are focused on their task and cannot focus on learning.

- Paas, et al. (2003)

# Limit sentences to 20 words



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**Fact:** Users scan—they do not read long sentences or paragraphs.

- Bailey (2000), Spool, et al. (1998)

# Long vs short sentences

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## **32 words**

Iceland was one of the last large islands uninhabited by humans until it was discovered and settled by immigrants from Scandinavia and from Ireland and Scotland during the 9th and 10th centuries.

## **9 and 18 words**

Iceland was one of the last uninhabited large islands. It was discovered and settled by immigrants from Scandinavia, Ireland, and Scotland during the 9<sup>th</sup> and 10<sup>th</sup> centuries.

- [www.wikipedia.org](http://www.wikipedia.org)

# Write overviews for novices



**Fact:** Novices use overviews to remember information and build knowledge.

Experts are slowed down by overviews and try to skip them.

- Kalyuga, et al. (2003), Kardash & Noel (2000)

# Include examples



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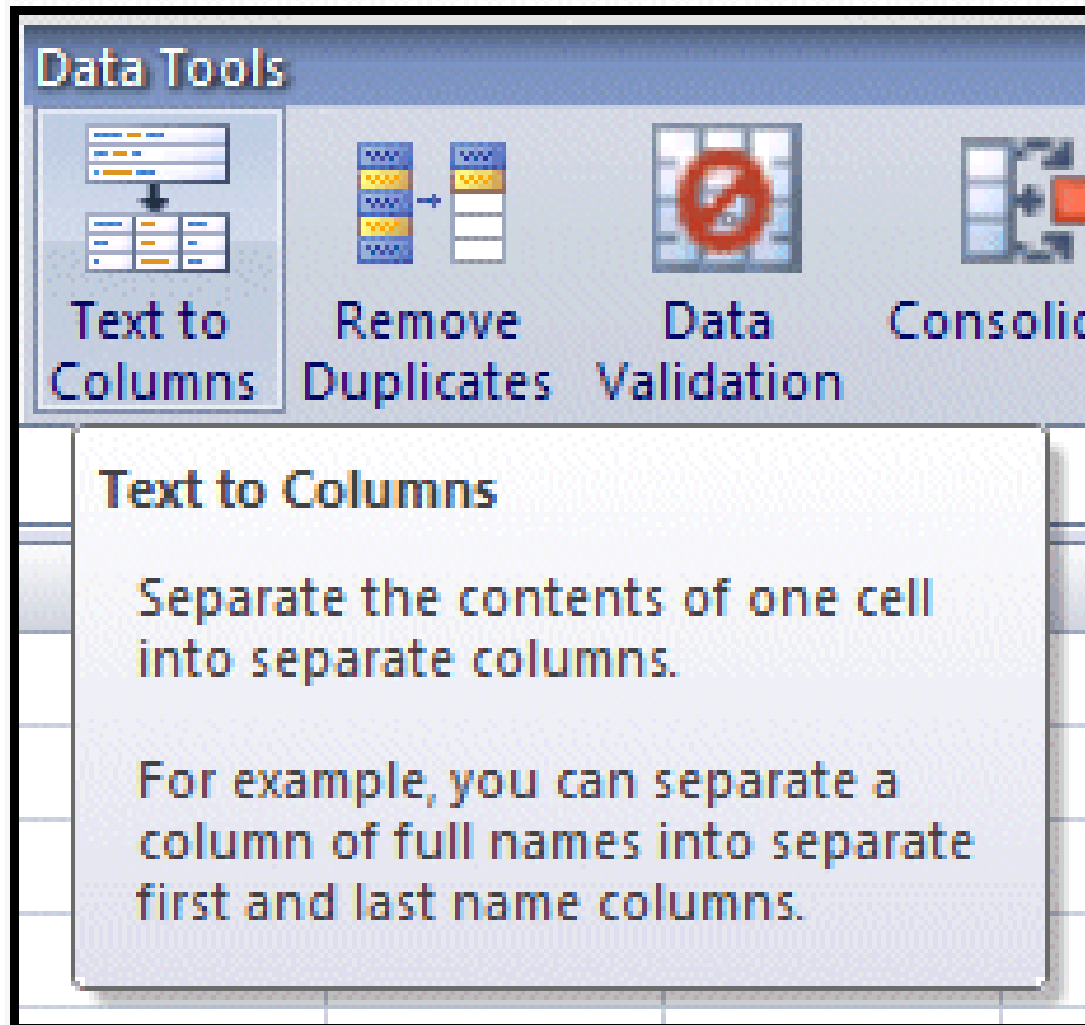
**Fact:** Users learn from examples.

- Große & Renkl (2006)

**Fact:** Users want examples.

- Moallem (2003)

# Examples in tooltips



"Super Tool Tips" in Microsoft Office 2007

# Linking guidelines

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- ▶ Where should links appear?
- ▶ What should links look like?



# Position links on the first "screen"



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**Fact:** Users spend 80% of their time on the first 'screen.'

- Fukuda & Bubb (2003), Bernard et al. (2001b),  
Bailey et al. (2000), Byren et. al. (1999)

**Fact:** Users do not prefer links to be placed at the bottom of the topic.

- Fukuda & Bubb (2003), Bailey et al. (2000),  
Bernard et al. (2001b), Byren et. al. (1999)

# Provide links on the right side



**Fact:** Users click on links in the right margin with more efficiency than topics on the left because they are closer to the scroll bar.

- Reuning (2004), McCarthy et al. (2003), Bailey (2000), Kalbach & Bosenick (2000)

# Links on the right side

The screenshot shows a help system interface. At the top, there is a navigation bar with links for 'Table of Contents', 'Glossary', 'Index', and a 'Search' button. Below this is a search box containing the word 'escalation' and a 'GO' button. The main content area is titled 'Removing an Escalation Request' and includes a sub-header 'What can I do on this page?'. The text explains that the 'Remove Escalation' page is used to cancel escalation of a case. A 'Related Information' sidebar on the right lists links for 'Adding a case note', 'Adding a case', 'Escalating a case', 'Viewing case details', and 'Viewing case notes'. Below the main text, another sub-header 'What can I do on this page?' is followed by a link 'To remove a case escalation request' and a numbered list of seven steps. The footer contains the copyright notice '© 2006 CheckFree Corporation. All rights reserved.'

Table of Contents Glossary Index Search

Type in the word(s) to search for:  
escalation GO

## Removing an Escalation Request

[What can I do on this page?](#)

You can use the Remove Escalation page to cancel escalation of a case. The case will no longer be flagged for manager attention.

You might remove an escalation request if you have resolved the issue or you have discussed the case with your manager.

### Related Information

- [Adding a case note](#)
- [Adding a case](#)
- [Escalating a case](#)
- [Viewing case details](#)
- [Viewing case notes](#)

### What can I do on this page?

[To remove a case escalation request](#)

1. Open the Case Detail page for the appropriate case.  
You can search for a case, open it from a work list, or open it from the subscriber's Account Overview page, Case History section.
2. Click **Remove Escalation**.
3. If appropriate, provide information about the case.
4. If appropriate, add a case note.
5. To save your work, click **Save and Go to Case Detail**.  
The Case Detail page appears.
6. If you are finished, close the case. Click **Close**.  
The subscriber's Account Overview page appears.  
  
To send the case for further research, click **Send for Internal Research**.  
The subscriber's Account Overview page appears.
7. To send the case to CheckFree, click **Send to CheckFree**.  
The subscriber's Account Overview page appears.

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# Use text links, not image links



**Fact:** Users prefer text links, partially because they change color.

- McElwain, et al. (2002), Spool, et al. (1998)

**Fact:** Users prefer text links to icon links.

- McElwain, et al. (2002)

# Use descriptive link text



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**Fact:** Users can be confused by similar link labels.

- Miller & Remington (2004), Reuning (2004)

# Visited links should change color



**Fact:** If visited links do not change color, users will 'bounce' between pages.

- IBM (1999), Nielsen (1999a, 1999b), Spool, et al. (1998)


# Identify link targets



**Fact:** Users assume that a link goes to a new page on the same site.

- Spool, et al. (1998)

# Identifying link targets

**EARTH-SUN EXPLORATION DIVISION**

- + NASA Home Page
- + Goddard Space Flight Center
- + Earth-Sun Exploration Division

+ ABOUT US	+ SUBCOMMITTEES	+ PERSONNEL	- DOCUMENTS	+ CALENDAR	+ LINKS
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[+ Home](#) [Back](#)

## Committee for Education & Public Outreach


### Documents

- + NASA Documents
- + Science Communications Research

### NASA DOCUMENTS


 <b>Adobe</b> = .pdf (Portable Document Format)	 <b>W</b> = .doc (MS Word)	 <b>P</b> = .ppt (MS PowerPoint)	 <b>www</b> (External Link)
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 [2/09/2005: Earth-Sun Exploration Division's Education & Public \(E&PO\) Outreach All-Hands Meeting](#)

At the February 9, 2005, Earth-Sun Exploration Division's Education & Public (E&PO) Outreach All-Hands Meeting, David Herring gave an introductory overview presentation in which he set forth a vision for better aligning our efforts as a function of target audience. Two independent assessments—one by Herring and one by Harmonic International—concluded that, overall, NASA's E&PO efforts have generally suffered from a lack of effective coordination.

(File size: 5.1 MB)

**Adobe** [American Perception of Space Exploration](#)

In 2004, in concert with the Center for Cultural Studies and Analysis, Harmonics International prepared a white paper on what the American public knows and thinks about NASA. While the public knows very little about what precisely NASA does – including Earth science in particular – the public generally has a very positive view of NASA, which carries over from success of the Mercury and Apollo missions. Interestingly, the data show that the public supports NASA's role in "advancing knowledge" and "increasing understanding of Earth" ahead of "increasing understanding of the universe."

esdepo.gsfc.nasa.gov/docs



# Use bulleted lists for links

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**Fact:** Users make less mistakes with bulleted link lists.

- Spain (1999)

**Fact:** Users prefer bulleted link lists.

- Spain (1999)



# Bulleted lists for related links

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Adding a case note  
Adding a case  
Escalating a case  
Viewing case details  
Viewing case notes

- Adding a case note
- Adding a case
- Escalating a case
- Viewing case details
- Viewing case notes

Adding a case note  
Adding a case  
Escalating a case  
Viewing case details  
Viewing case notes

# Navigation guidelines

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- ▶ Search vs TOC vs index: who wins?
- ▶ How deep should a TOC be?
- ▶ Are breadcrumbs useful?

# Search is more important than a TOC or index



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**Fact:** 92% of users think search tools are easy to use and prefer them.

- Leporini (2004)

**Fact:** Searching is the 2<sup>nd</sup> most common online activity.

- Fallows (2004)

**Fact:** 87% of users say they find the information they want most of the time by searching.

- Fallows (2004)

# Search is not always effective



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**Fact:** Users are successful searching 42-78% of the time.

- 42% – Spool (1998), 78% – Sellen, et al. (2002)

**Fact:** Users do not know how to perform Boolean searches.

- Dumais et al. (2003), Jansen, et al. (2000)

# TOCs should be wide, not deep



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**Fact:** Users prefer (and are faster using) broad TOCs with 1 or 2 levels.

- Bernard (2002), Zaphiris (2000)

# Provide breadcrumbs...if it's easy



**Fact:** Users request breadcrumbs more than any other navigational tool.

- Moallem (2003)

**Fact:** Users navigate faster with breadcrumbs.

- Hull (2004), Lazar & Eisenbrey (2000)

**Fact:** Users rarely use breadcrumbs.

- Rogers, et al. (2003a, 2003b)

# Looking ahead, looking back

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- ▶ Is embedded UA better than external help?
- ▶ Does context-sensitive help make a difference?
- ▶ Do users still want printed documentation?



# Provide embedded UA for novices



**Fact:** Novice users are least likely to use a help system, but they gain the most from using it.

- Renkl (2002), Wood & Wood (1999)

# Embedded UA for novices

Reviews and free downloads at Download.com - Microsoft Internet Explorer

Address [http://www.download.com/3001-8022\\_4-10399602.html?dl=en](http://www.download.com/3001-8022_4-10399602.html?dl=en)

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- Use custom scanning options
- Scan volume for ADS

Search for negligible risk entries

00:01:45

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download.com

# Provide embedded UA for all users



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**Fact:** Users will not request help or even hints, even after making multiple mistakes.

- Alevan et al. (2006), Alevan & Koedinger (2000)

**Fact:** Users don't see embedded UA as "help."

- Grayling (2002)

**Fact:** Users use embedded help.

- Martin et al. (2005), Grayling (2002)

# Provide context-sensitive help



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**Fact:** Users are more successful using context-sensitive help.

- Capobianco (2003)

# Don't forget about print



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**Fact:** 61% of users prefer online documentation.  
31% of users prefer printed documentation.  
- Moallem (2003)

**Fact:** 54% of users admit using online documentation monthly.  
**92%** of users admit using printed documentation monthly.  
- Smart, et al. (2001)



# Questions?

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Ask now, or catch me later...

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