



# Alternative Text for Images

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Sponsored by Microsoft Canada

Slides available at <http://userlab.usask.ca/CSUN2011>

# If a Picture is Worth 1000 Words ...

... why don't developers give even a few  
good ones?

# When alt attribute exists ...

- “ ”
- Repeat caption
- Default authoring tool text: “Enter alternative text here”

# Guidance

- Should provide alternative text
  - Authoring Tools
  - Standards
- What should the text contain?

# Current Efforts in ISO/IEC

- ISO/IEC 20071-11: “Guidance on Creating Alternative Text for Images”

# Background

- Lack of research and guidance specific to creating alternative text
- Related areas providing research:
  - Library Cataloguing
  - Captioning and Audio Description
  - Image Indexing
  - Art Description
  - Tactile Representation

# The ISO/IEC 20071-11 Approach

1. Identify the purpose of the image
2. Identify the significant image components
3. Consider W5H questions for the image and components
4. Elaborate on the significant answers

# Purpose of Images

- Informative
  - Tell the user something
  - Most images
- Control
  - Perform an action
- Decorative
  - Visual Appeal
- Formatting
  - Organize document content

# How important is something?

- Importance influences:
  - Components identified
  - Information identified
  
- 3 levels:
  - Significant
  - Useful
  - Helpful

# The Big “What”

- “What does the image or component represent within the document?”
  - Conceptual: emotions, themes, symbolism
  - Objective: objects, actions
  - Perceptual: shapes, colours, sizes

# Elaborating

- The whole image and important components
  - might need some elaborations
- Only important elaborations
  - need be considered
- ISO/IEC 20071-11
  - contains a large number of optional questions that might provide important elaborations

# Elaborating “What” and “Who”

- Some questions to elaborate include:
  - What emotions are being expressed?
  - What emotions are meant to be felt?
  - What does the person look like?
  - What is the relationship between objects or components?
  - What action or event is taking place?
  - What shape/size/color/texture is it?

# Elaborating “When”

- Some questions to elaborate include:
  - What season is represented?
  - Which era is it?
  - Sequential relationships
    - What are the steps?
    - How is each step temporally related?
  - Slide Show
  - State

# Elaborating “Where”

- Some questions to elaborate include:
  - What is the place or location?
  - Where is the component located within the image?
  - Where is the component relative to another component?
  - Where is the image relative to the page content referencing it?

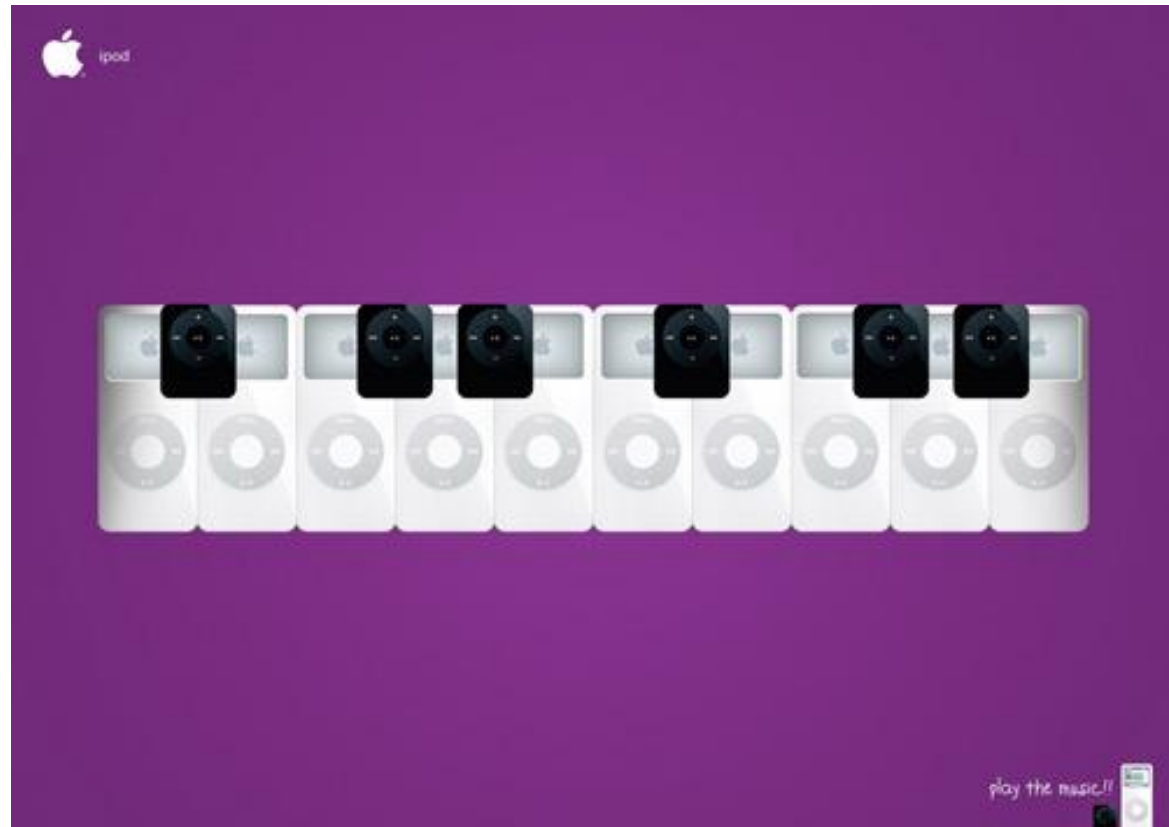
# Elaborating “How Much”

- Some questions to elaborate include:
  - What does the quantity represent?
  - What is the unit of the quantity?
  - What is the precision or statistical significance?

# Elaborating “How”

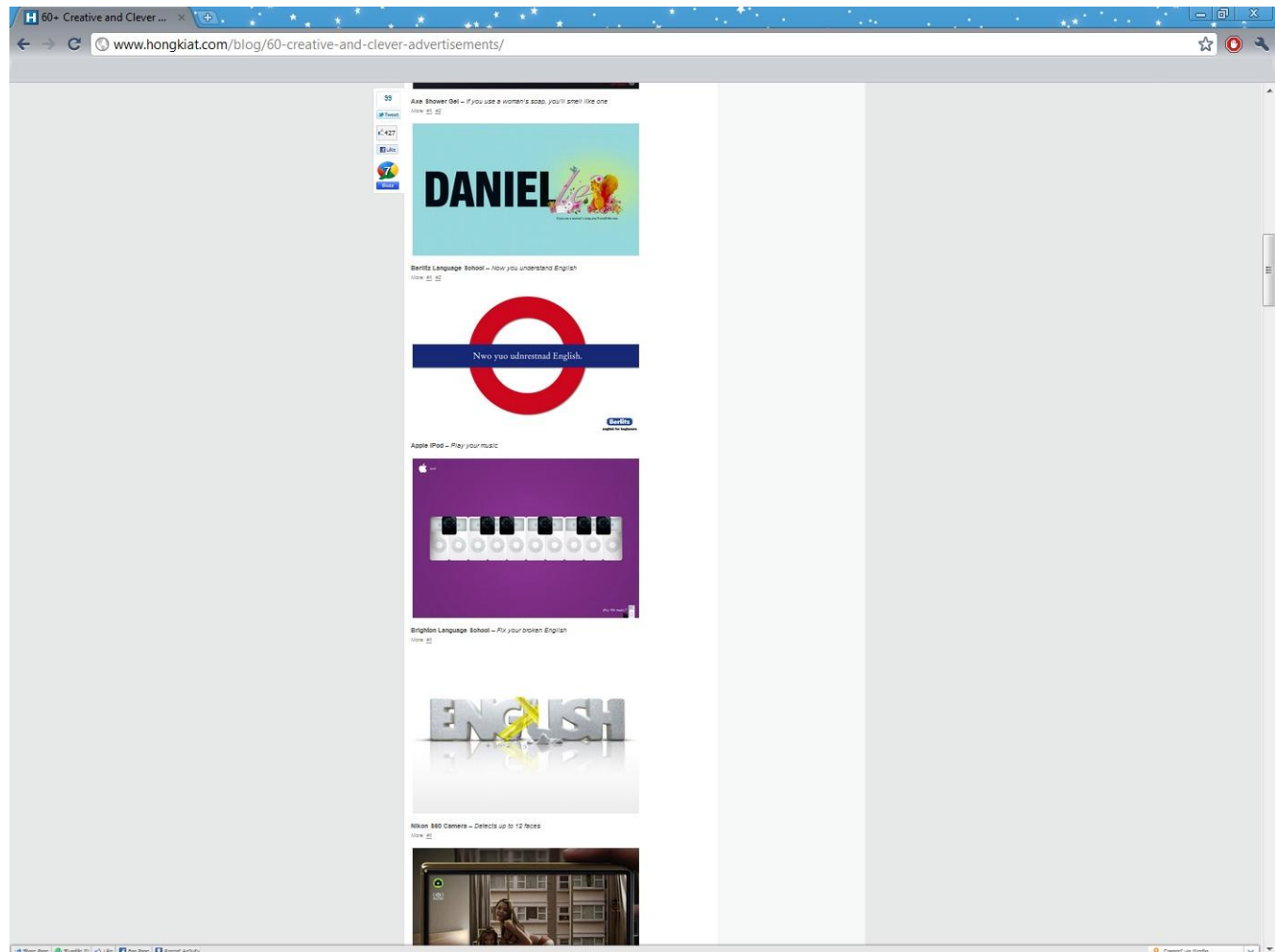
- Some questions to elaborate include:
  - How is the user supposed to interact with the image or component?
  - What is intended to result from interacting with the image or component?

# Example



<http://www.hongkiat.com/blog/60-creative-and-clever-advertisements/>

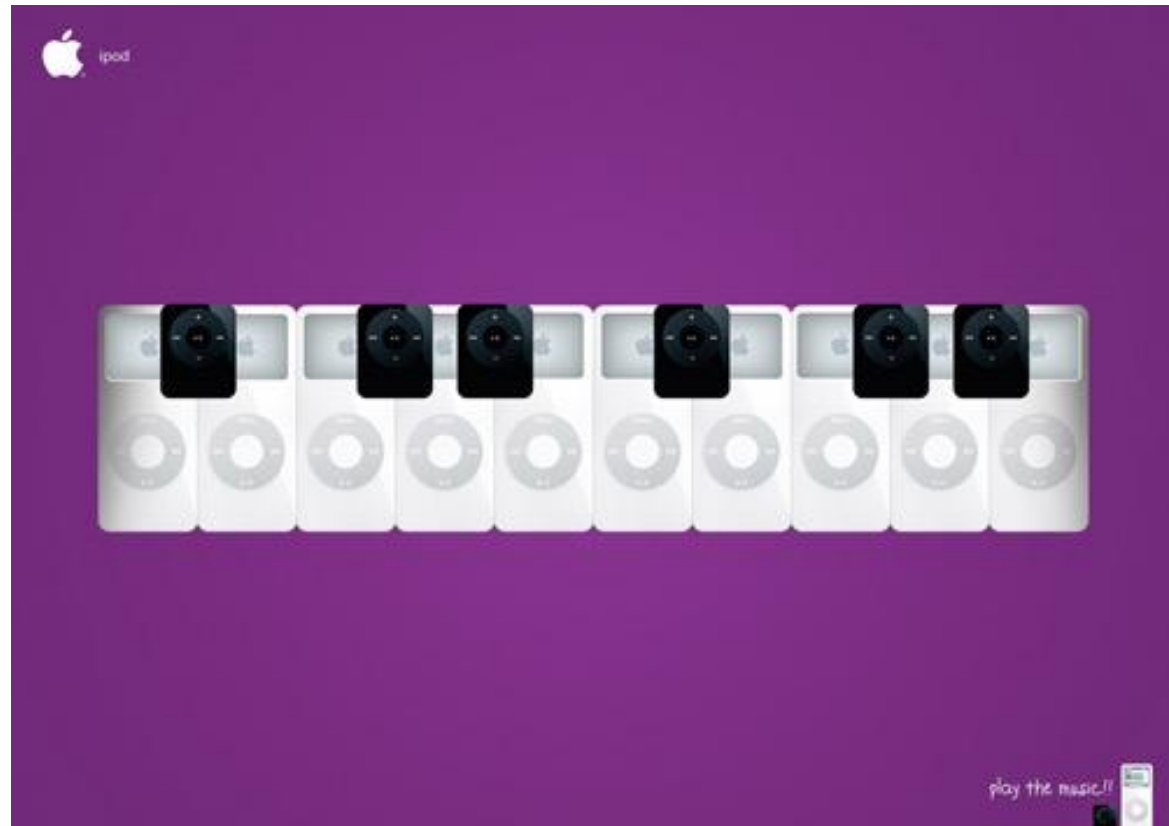
# Example – Context



# Example – Purpose

- This image is used to inform the user by promoting iPods in a creative manner.

# Example



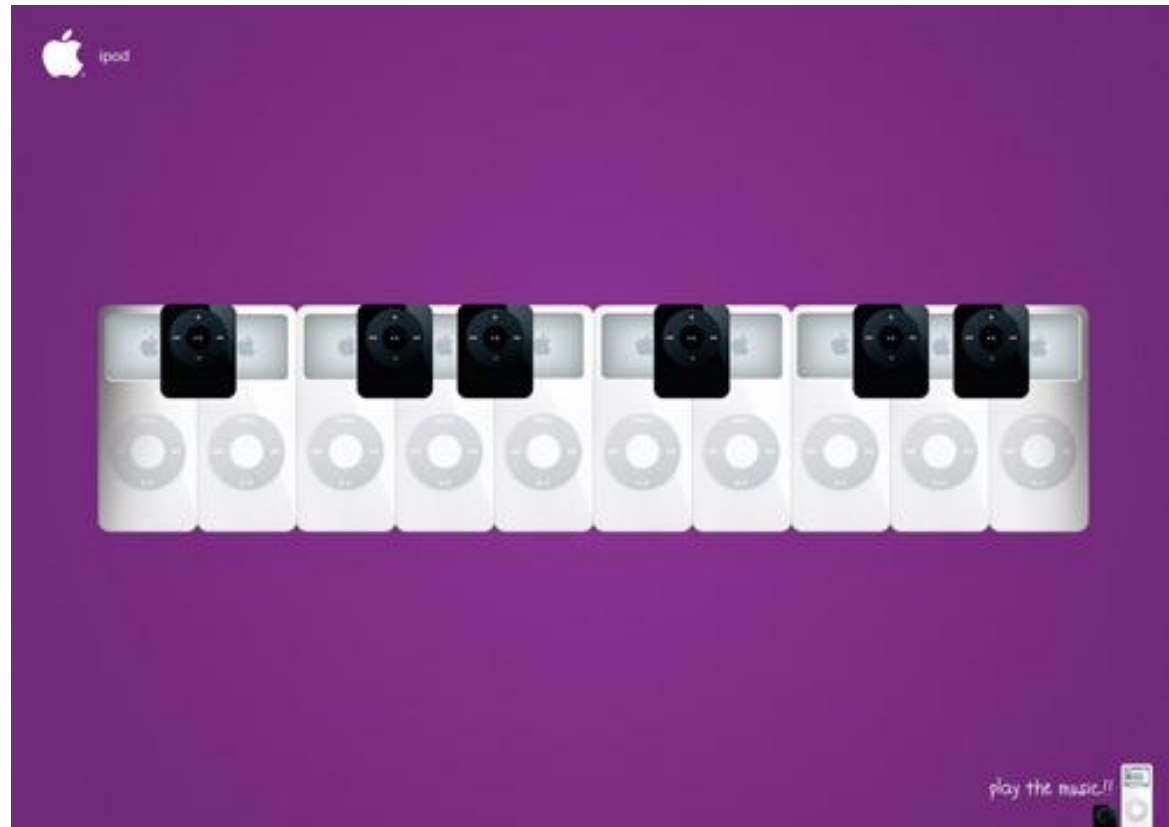
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# Example – Components

[S] = Significant, [U] = Useful, [H] = Helpful

- Whole Image [S]
- Piano made of iPods [S]
  - White iPods [U]
  - Black iPods [U]
- Company Logo (Top Left) [S]
- Slogan (Bottom Right) [S]

# Example



<http://www.hongkiat.com/blog/60-creative-and-clever-advertisements/>

# Example – Whole Image

[S] = Significant, [U] = Useful, [H] = Helpful

- What is the image or image component representing or symbolizing? [S]
  - It's a metaphor that you can use iPods to play music, similar to a musical instrument. It is a double entendre with the two meanings of the word "play".
- Where is the image located with regards to the object that contains it? [H]
  - Below its caption, the tenth image in the list.
- How is the user supposed to use the image? [U]
  - Mouse over and drag the image.
- What is intended to result from interacting with the image? [U]
  - Share the image via social networks.

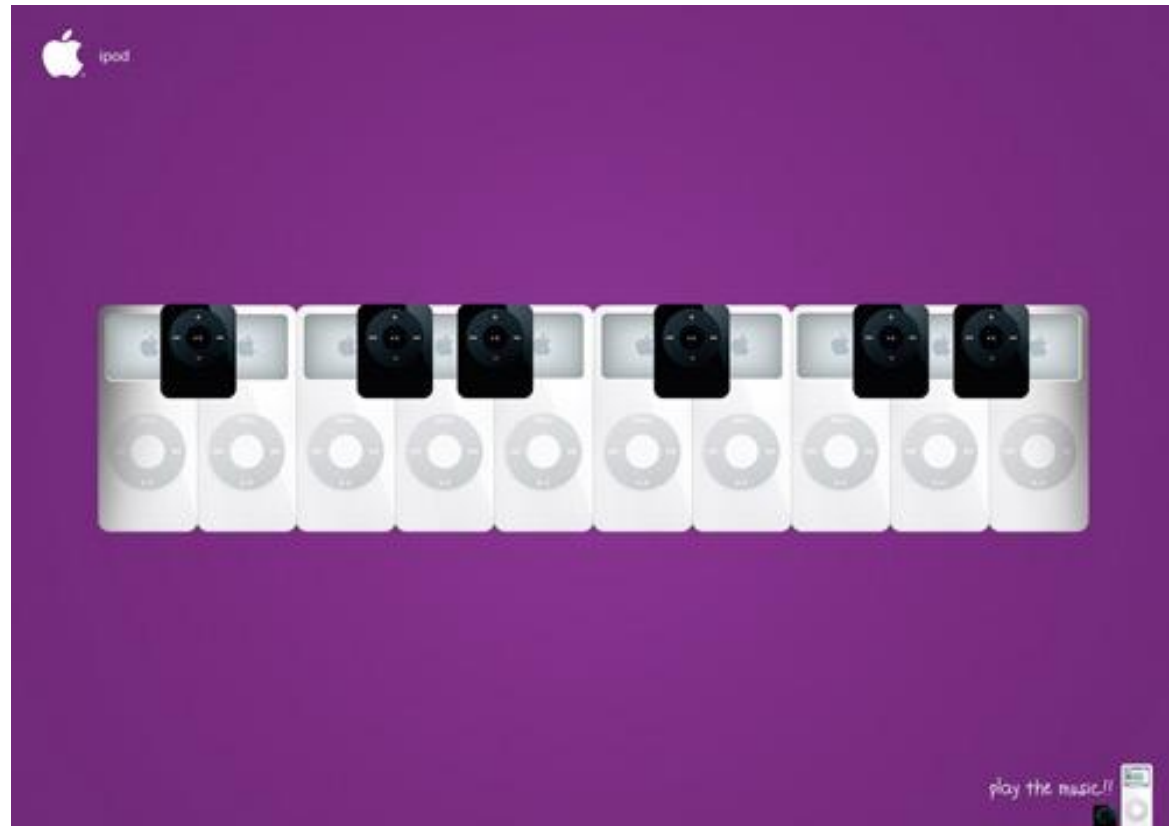
# Example – Whole Image Text

A creative advertisement for Apple's iPod where numerous iPod shuffles and nanos are arranged in the shape of a piano.

The advertisement is a metaphor that you can use iPods to literally play music, similar to a musical instrument. It is a double entendre with the two meanings of the word "play".

The image is the tenth image in a list of creative advertisement images. It is located below its caption. Placing the mouse over the image gives you the option to share the image via various social networks. This is done by dragging the image to icons of various social networks.

# Example



<http://www.hongkiat.com/blog/60-creative-and-clever-advertisements/>

# Example – Piano Made of iPods

[S] = Significant, [U] = Useful, [H] = Helpful

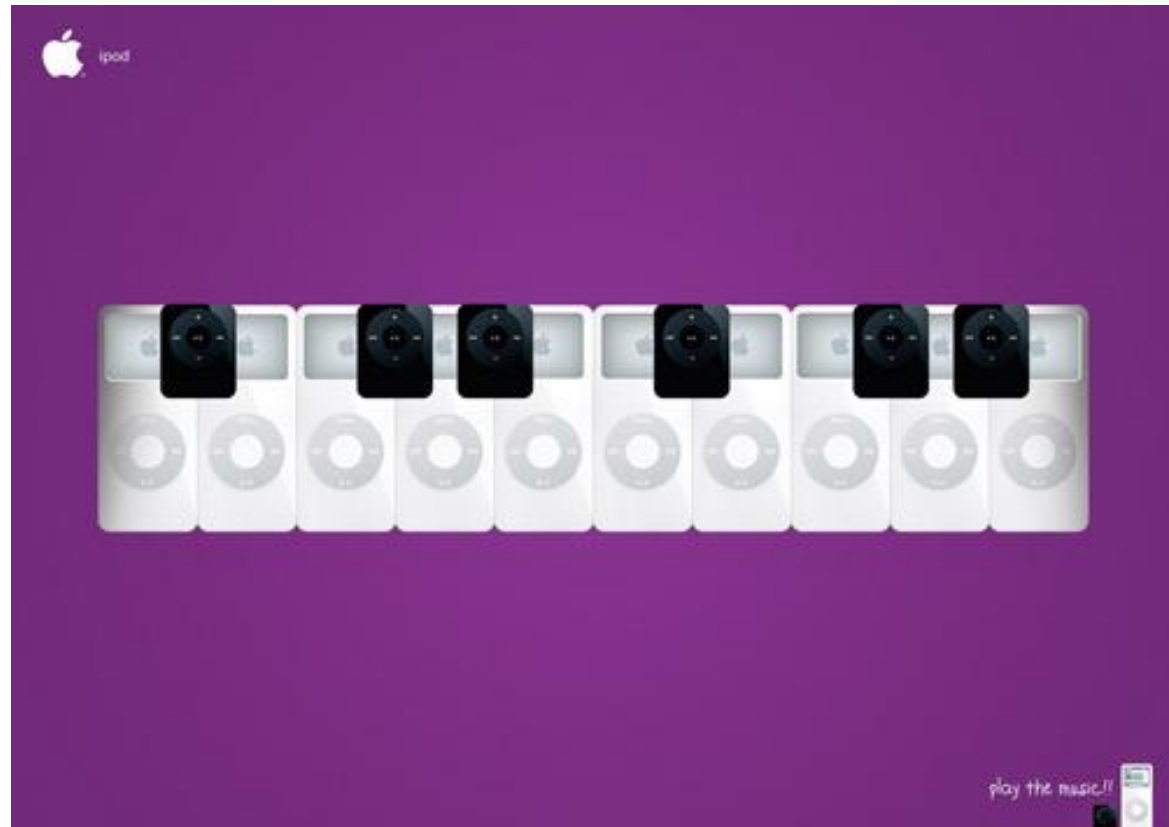
- What is the shape of the component? [S]
  - A piano
- What is the brand/model of the object? [U]
  - iPod nano and iPod shuffle
- What are the colors of the component? [S]
  - Nanos are white, shuffles are black
- Where is the component relative to other entities? [S]
  - The shuffles are placed on top of the nanos, spaced out to look like a piano.
- What is the quantity? [U]
  - 10 white nanos, 6 black shuffles

# Example – Piano Made of iPods

## Text

In the centre of the advertisement, ten white iPod nanos lay side by side, with the screens facing up. They represent the white keys on a piano. On top of the white iPod nanos lay six black iPod shuffles, which are half the length of the white iPod nanos. The iPod shuffles are on the upper part of the cracks between a pair of iPod nanos. They represent the black keys on a piano. The order of the iPods is: white-black-white-white-black-white-black-white-white-black-white-black-white-black-white.

# Example



<http://www.hongkiat.com/blog/60-creative-and-clever-advertisements/>

# Example – Company Logo

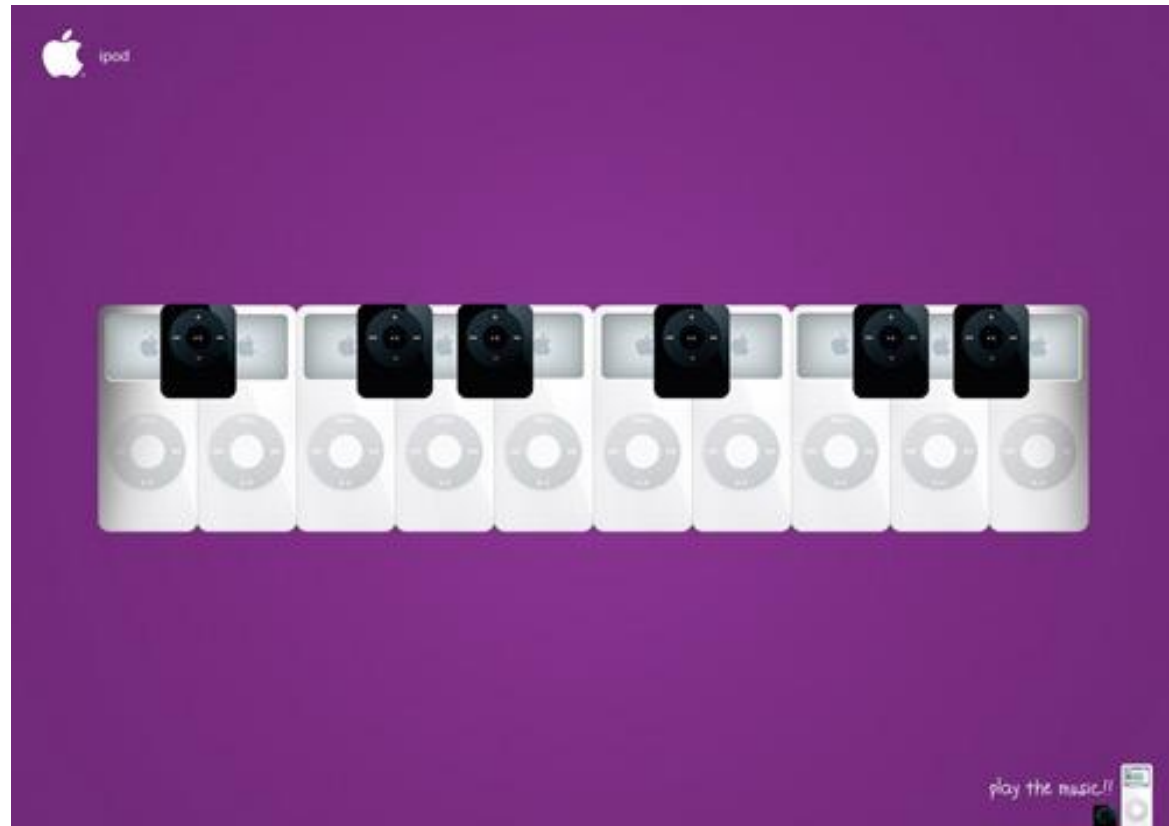
[S] = Significant, [U] = Useful, [H] = Helpful

- What is the color of the component? [H]
  - White
- Where is the component located? [H]
  - Top left corner
- What is the shape of the component? [S]
  - An apple with a bite taken out of the right side.
- What does the text say? [S]
  - “iPod”
- Where are the components relative to each other? [S]
  - The apple is to the left of the text.

# Example – Company Logo Text

On the upper left corner, there is a white Apple logo followed by the text “iPod” written in white.

# Example



<http://www.hongkiat.com/blog/60-creative-and-clever-advertisements/>

# Example – Slogan

[S] = Significant, [U] = Useful, [H] = Helpful

- Where is the component located? [H]
  - Bottom right corner
- What does the text say? [S]
  - “Play the music!!”
- What does the object represent? [U]
  - iPod nano, iPod shuffle
- Where are the components relative to each other? [U]
  - The text is on the left, the iPod shuffle in the middle, iPod nano on the right

# Example – Slogan

On the lower right corner, there is the text “Play the music!!” written in white. The text is followed by a black iPod shuffle and a white iPod nano.

# Example – Possible Rewording as Good Alternative Text

A creative advertisement for Apple's iPod where numerous iPod shuffles and nanos or minis are arranged in the shape of a piano.

In the centre of the advertisement, ten white iPod nanos lay side by side, with the screens facing up. They represent the white keys on a piano. On top of the white iPod nanos lay six black iPod shuffles, which are half the length of the white iPod nanos. The iPod shuffles are on the upper part of the cracks between a pair of iPod nanos. They represent the black keys on a piano. The order of the iPods is: white-black-white-white-black-white-black-white-white-black-white-white-black-white-black-white.

On the upper left corner, there is a white Apple logo followed by the text "iPod" written in white. On the lower right corner, there is the text "Play the music!!" written in white. The text is followed by a black iPod shuffle and a white iPod nano. The background is a solid purple.

The advertisement is a metaphor that you can use iPods to literally play music, similar to a musical instrument. It is a double entendre with the two meanings of the word "play".

The image is the tenth image in a list of creative advertisement images. It is located below its caption. Placing the mouse over the image gives you the option to share the image via various social networks. This is done by dragging the image to icons of various social networks.

# Implementations Concerns

- USERLab at the University of Saskatchewan is conducting research into:
  1. Ability of the approach to be used by different people
  2. Ability to take guidance to development tools
  3. Ability to apply the approach in a reasonable time
  4. Comprehensiveness of resulting alternative text

# Different Users

- User groups applying the method:
  - developers,
  - content providers,
  - usability and accessibility specialists,
  - general users
- Results:
  - Very descriptive responses from all types of users
  - Developers performed as well or better than other groups

# Implement within Development

- Prototype tool created and tested
  - with the same users as the method
- Results:
  - More components identified
  - More concise responses
  - Too many questions (need to filter)
  - Need more help on some questions

# Reasonable Time

- Not just 30 seconds
- Not more than 30 minutes
- Target: 5 to 15 minutes
- On-going work in optimizing the tool

# Comprehensive Descriptions

- New Study (starting soon)
  - Evaluate descriptions
  - Identify missing information
  - Rate importance of information
- Objectives
  - To improve guidance in ISO/IEC 20071-11 by
    - identifying additional (optional) questions
    - clarifying guidance on levels of importance

# Get Involved

- Prototype available for use:
  - <http://userlab.usask.ca/AltTextTool>
- Volunteers for Comprehensiveness Evaluation
  - Contact [lisa.tang@usask.ca](mailto:lisa.tang@usask.ca)
- Involvement in developing ISO/IEC 20071-11
  - via your National Standards Body
  - Contact [carter@cs.usask.ca](mailto:carter@cs.usask.ca)

# Thank You

## Questions and Comments?

Prototype Tool: <http://userlab.usask.ca/AltTextTool>

Slides: <http://userlab.usask.ca/CSUN2011>

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