

Cross-cultural design and Internationalization

Based on slides from D. Pruitt-Mentle, D. McCracken & R. Wolfe, T. Winograd, E. Reiter and article by A. Marcus & E. Gould

Definitions of Culture

- Many definitions of *culture* and few agree as to the exact definition
- RE: cross-cultural design
 - Culture stands for the way of life of a people, the sum of their learned behavioral patterns, attitudes and material things (Edward Hall, 1959, *The Silent Language*)
 - Culture is the collective programming of the mind, which distinguishes the members of one human group from another (Hofstede, 1980).

Cultural Expectations

The different backgrounds of people may cause them to have different expectations and attitudes towards different interfaces. The different expectations affect the way they learn to use and understand the technology.

Research

- Research indicated that **culture does influence interface acceptance** (Evers and Day, 1997)
- **Acceptance** of interfaces was **related** to the user's **cultural background** and users from different cultures were found to not only have **different preferences** in interface design but also use **different processes** of acceptance (Evers and Day, 1997; Choong and Salvendy, 1998; Griffith, 1998)
 - Design preferences that were especially related to culture were **colors, menus, input devices, sounds and multimedia.**

Cultural Problems in Business

- When Coca-Cola first went to China, some shop keepers wrote their name phonetically; the characters spelt out “bite the wax tadpole”. Coca-Cola’s official one was much better:
"to allow the mouth to be able to rejoice"
- Coco, a perfume by Channel, is the word “crap” in Portuguese.
- Dogs are thought of as the lowest form of life in some cultures. In the Middle East, calling somebody a dog can be a powerful insult. This is also true in countries such as Spain and Portugal. Having the image of a dog as part of the interface (Apple moof, PowerPoint dog, Word help icon) would not be advised for those markets (Fernandes, 1996)
- “How Google became a rude word in China” (Guardian, 29-4-06)
“When I first heard the name Guge, I couldn’t help laughing. It sounded like fool, funny and fart”.

Cultural Problems in Business (2)

- In Taiwan, the translation of the Pepsi slogan 'Come alive with the Pepsi Generation' came out as 'Pepsi will bring your ancestors back from the dead.'
- In Chinese, the Kentucky Fried Chicken slogan 'finger-lickin' good' came out as 'eat your fingers off.'
- When Gerber started selling baby food in Africa, they used the same packaging as in the US (showing a baby). Later they learned that in Africa, companies routinely put pictures on the label that describe what's inside, since most people can't read.



Business Cultural Models

- Globalization
- Internalization
- Localization
 - Technical Localization
 - National Localization
 - Cultural Localization

Jacob Nielson (1994)

Business Cultural Models (2)

- Globalization
 - Product is “neutral”
 - “One size fits all”
 - Removing all culturally specific features from the software
 - Changes at the interface level--not functionality
- Internationalization
 - Same as globalization
 - But “culture” limited to national boundaries
 - e.g., Globalization = Hispanic; Internationalization= Mexico, El Salvador
- Culture is not bounded by nations
 - One culture in many nations
 - One nation with many cultures

National Localization

- The new product is able to fully support all written & spoken language, punctuation, and formats and to solve the particular needs associated with a given group.
- Translating text, date, time, number formats and localizing other aspects such as images, symbols, icons, and pictures.

Cultural Localization

- Targets other issues such as appeal, correctness, quality and taste
- Modifies **flow of information and functionality**
- Produces designs that are appropriate for a culture's values , tastes and history
 - Attractive
 - No undesired messages
 - Intuitive

Cross-Cultural

“Cross Wiring”

- Language
 - spoken
 - written
 - symbols
- Symbols
 - company logos
 - religious images
 - flags
- Non-verbal communication
 - body
 - facial expression
 - gestures

Cultural differences in use of language

- Americans, as a rule, prefer direct statements:
“Buy Now!”
That would be quite rude in Japan
- Therefore the translator must be a person who has lived in the country of the target language, and preferably be a native speaker
- Translator must know the subject area; “menu” on a computer window might become “list of food items” otherwise

Language Reflects Environment

- Amazon area - no word for *snow*
- Americans - *snow, powder snow, sleet, slush, blizzard, ice*
- In Northern Germany, “ein Glas Weisswein bitte” (a glass of white wine, please) or specify Moselwein or Rheinwein
- In Southwest Germany- expected to specify type of wine, vineyard and year

Examples of differences in language

- Navajo do not have a word for *late* (*time is relative*)
- Mandarin Chinese, one word (*qing*) represents various hues of blue and green
- Americans *tomorrow* means midnight to midnight. Spanish-speaking *mañana* means in the future
- Chinese do not have a word for *communication*
 - *letter exchange*
 - *transportation traffic*

Written Communication

- Understand Patterns of Organization
 - East Asian cultures organize material based on relationships rather than on linear progression
 - Canadians like to have recommendations at the beginning of a report

Make format of dates unambiguous

In the United States, a date 5/2/41 means May 2, 1941; in much of the rest of the world it means February 5, 1941. Globalization cannot work with such ambiguity. Make clear what is meant, as below.

Enter date: (mm/dd/yyyy) <input type="text"/>	March 10, 2005
Date of Birth: <input type="text"/> (eg.03/10/1970) required	10 March 2005
Not needed after: Month <input type="text"/> Day <input type="text"/> Year <input type="text"/>	10-Mar-2005

Also, different cultures use different calendars. E.g. Lunar calendar in Israel, Emperor-based calendar in Japan, etc.

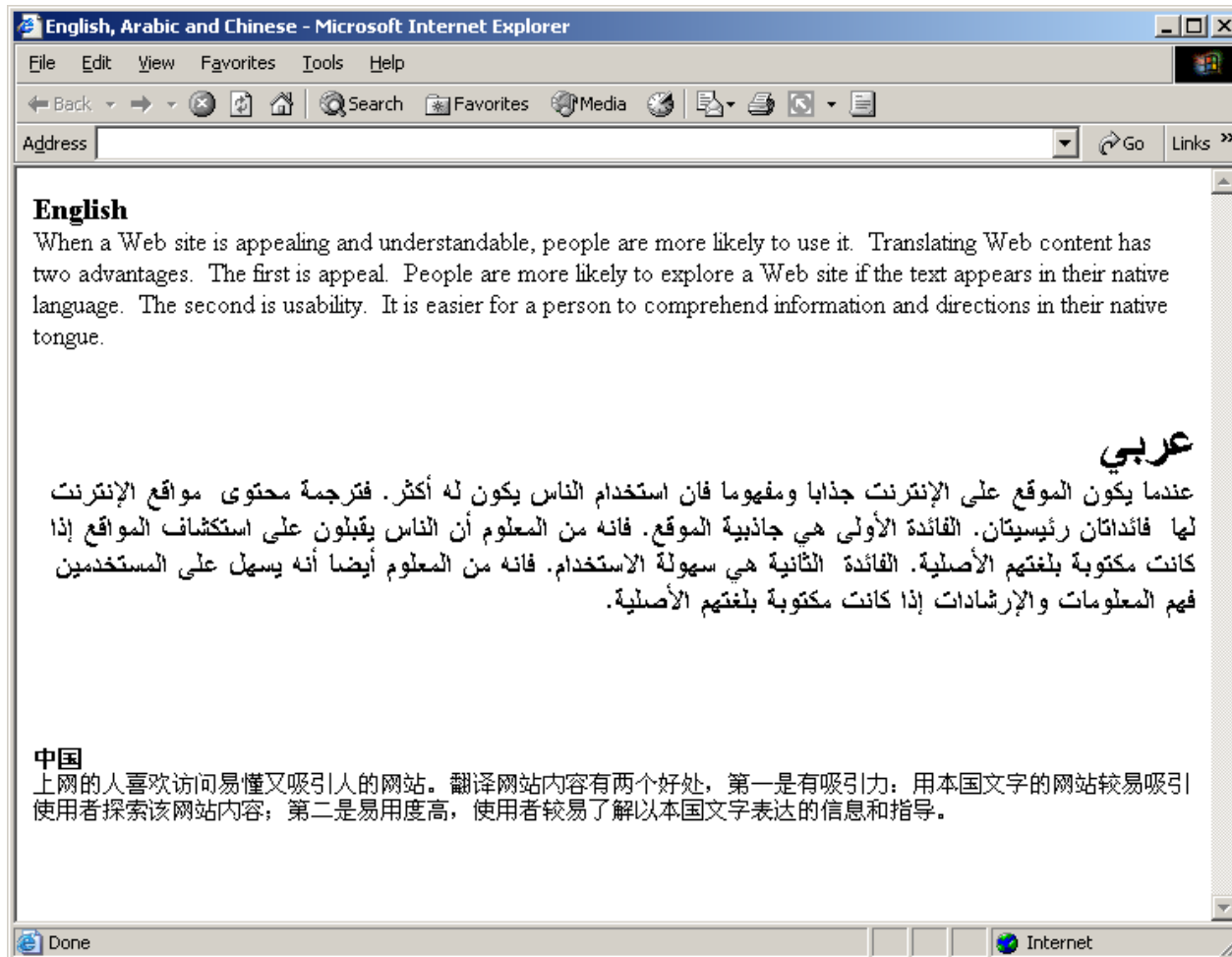
Make time unambiguous

- Use a 24-hour clock instead of A.M. and P.M.
- State time zone, or state that the time is GMT (Greenwich Mean Time).

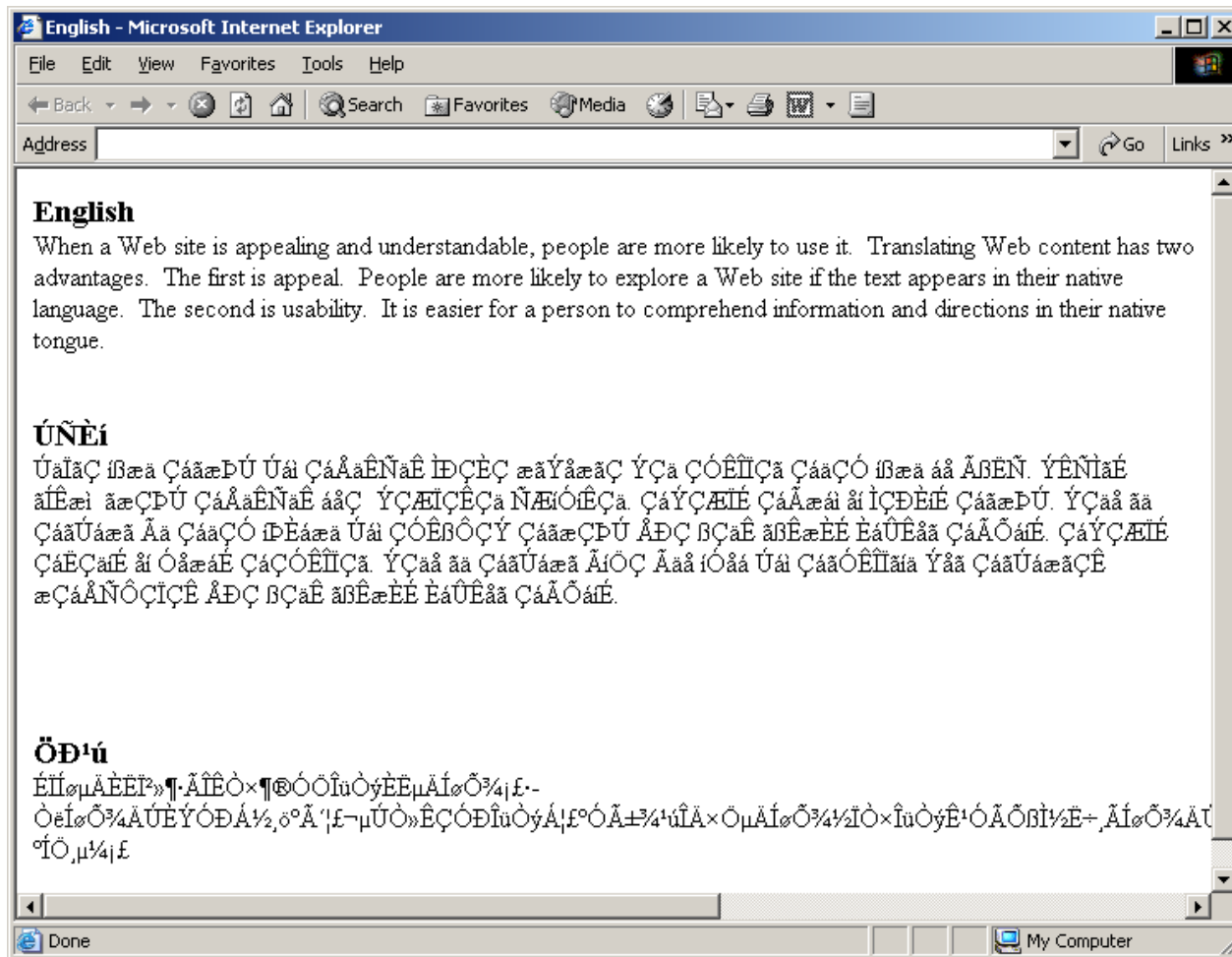
Make numbers unambiguous

- In expressing **currency**, include:
 - The **country**
 - The **numeric amount**
 - The **appropriate currency symbol**
- In giving **sizes, state units**:
 - Inches, feet, pounds, quarts, etc (English)
 - Meters, centimeters, grams, liters, etc (Metric)

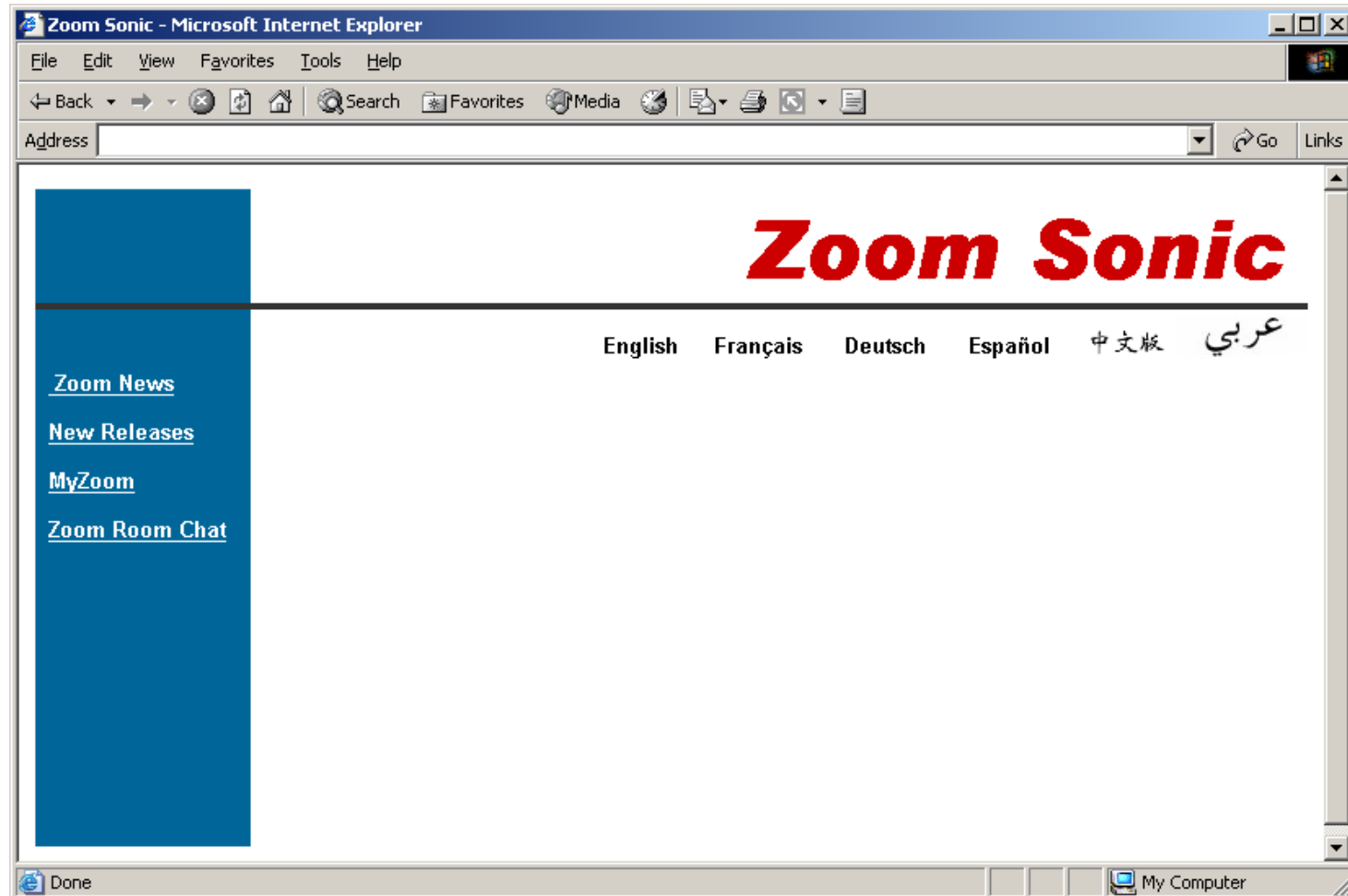
Languages read fine if the proper character encoding is specified



Without character encoding specified . . .



Give language choice in the target language



Other issues

- Keyboards differ: effect on keyboard shortcut keys?
- Appropriate font size differs

Font size	8 Point	36 Point
English	E	E
Japanese	撇	擧

Spoken and Written Language: High-Context vs. Low-Context

- Edward Hall, distinguished cultures on the basis of the role of context in communication
 - High-Context - less words more “other clues” (eg. Japan)
 - Low-Context - words, words, words (eg. German Swiss)
 - US middle of the Low-context range

High - Context

- View word-level-only messages as unsophisticated, childish, and rude
- Prefer-allusion to classical texts, parables and proverbs, understatements and antiphraxis (saying something in terms of what it is not) Asian thought pattern - *negative space*
- “I have some small experience in that”- world-famous mathematician’s life work

Non-Verbal Communication

- Body
- Facial Expression
- Gestures

Non-Verbal Body Language



- Rules regarding standing and position distance
- Face-on for Arabs
- 45 degree angle for Anglo-Saxons
- Side-to-side for Chinese

Non-Verbal Body Language

- In Buddhist Thailand never cross legs
- The sole of the foot is the furthest part from heaven and the least sacred. To show the bottom of the foot to someone is to show disrespect



Non-Verbal Communication



- Smiling in Japan is strongly associated with nervousness, social discomfort, or sorrow

Non-Verbal Communication

- In Asian and Middle-eastern cultures it is appropriate for the same sex to walk hand in hand but not the opposite sex



Hand Gestures

- V-for victory in US is obscene in some European countries



- “Everything is great!”
- “You are worthless!” (zero)
- “You are an indelicate sphincter!”



Gloucestershire



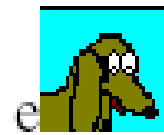
Luton Uni

Color, Icons, and Images

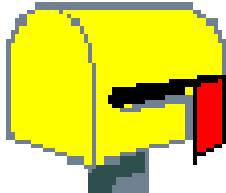
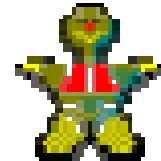
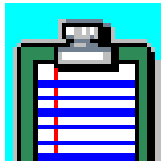
- Color
 - Different meaning in different cultures
 - Example: brides in Europe wear white—in China, white is the color of death

Culture	Red	Blue	Green	Yellow	White
United States	Danger	Masculinity	Safety	Cowardice	Purity
France	Aristocracy	Freedom Peace	Criminality	Temporary	Neutrality
Egypt	Death	Virtue Faith Truth	Fertility Strength	Happiness Prosperity	Joy
India	Life Creativity		Prosperity Fertility	Success	Death Purity
Japan	Anger Danger	Villainy	Future Youth Energy	Grace Nobility	Death
China	Happiness	Heavens Clouds	Ming Dynasty Heavens Clouds	Birth Wealth Power	Death Purity

Symbols/Icons



Symbols/Icons



Internationalization of Icons

Instead of...



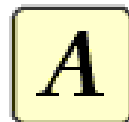
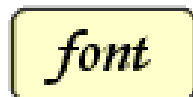
use...



Stop signs are not universal, and certainly the English word "STOP" should be avoided. A generic hand in a "Halt" position is better.



You might not think about this one, but the "e" in "e-mail" stands for "electronic" -an English word.



In some cases, it still makes sense to use a character, such as the Arabic "A" for font selection. It is much more portable to other languages than a full word such as "font" or "typeface."

Symbols



- China, death is not mentioned even by homonyms (words that sound like other words)

- El Dia de Los Muertos, the Day of the Dead, is a fiesta with deep meaning to Mexicans



Gestures as Icons

- Don't!
 - Common gestures in one country may have different meanings in other parts of the world
 - Simple gestures having no particular meaning in one culture may be highly offensive in another
- It sometimes seems that just about any gesture is obscene or threatening, somewhere in the world
- If you must use gestures, *do user testing in the target culture*

Localization even of game characters and settings...



EverQuest
US versus
Asia



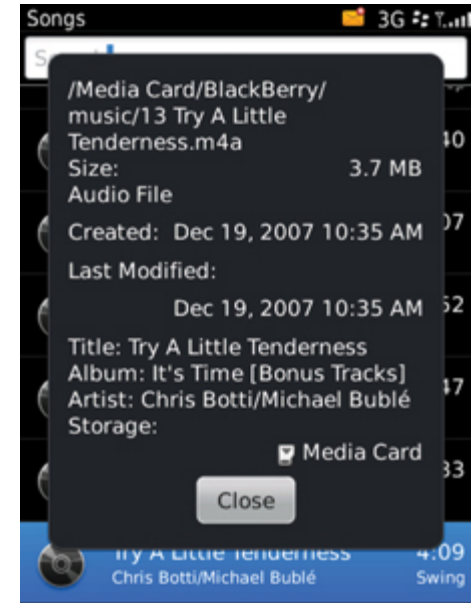
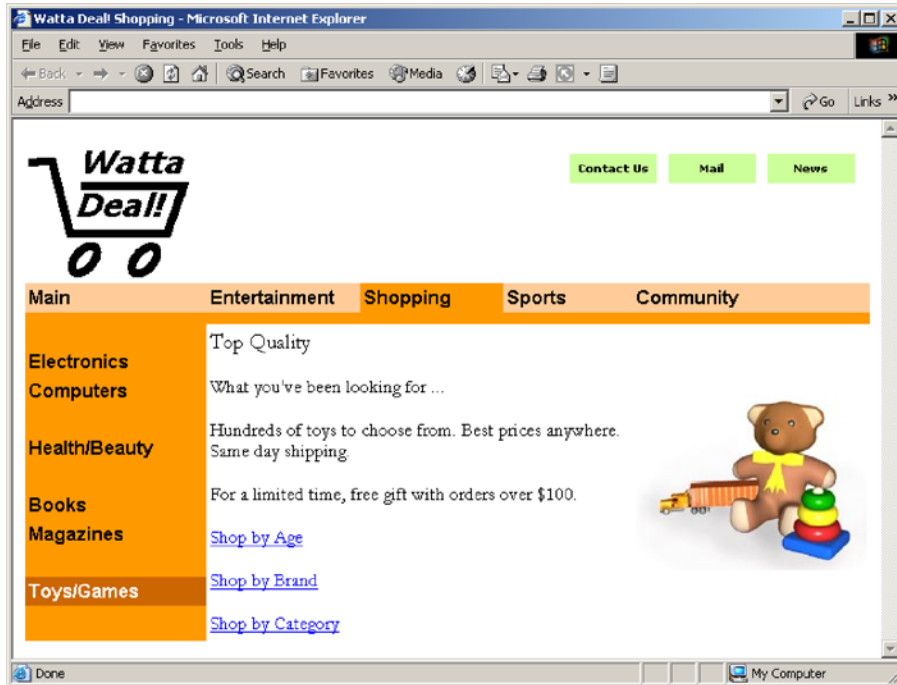
Formatting and Page-Layout Considerations

- Punctuation
 - In France: 1.234,56
 - In the United States: 1,234.56
 - Same quantity intended
- Addresses
 - Forcing international users to supply a state and ZIP code is confusing and/or insulting
- ...

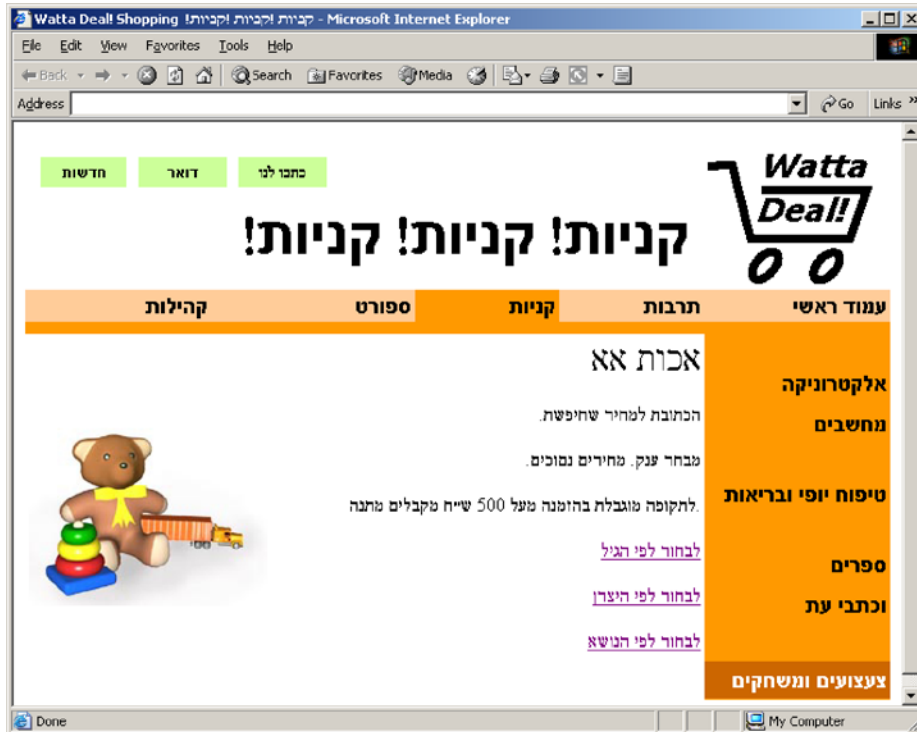
Reading direction of the target language

- Page layout should match the reading direction
- Left alignment in a left-to-right language
- Right alignment in a right-to-left language

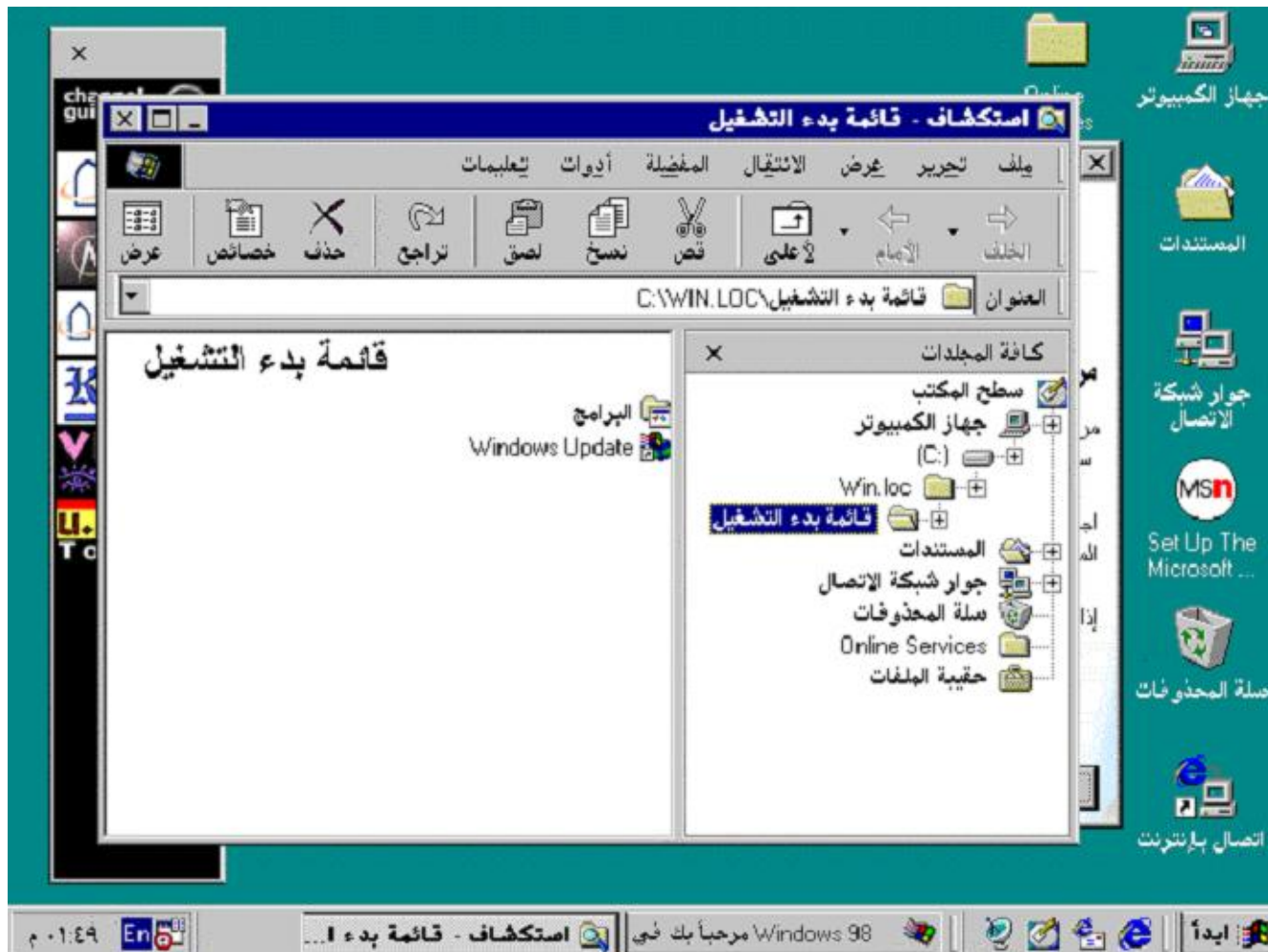
Interface in a left-to-right language



Same interface in a right-to-left language



Arabic windows



Designing for Cultural Differences

- What assumptions are you making?
- When are they stereotypes?
- How can you know whether they are accurate?
- Who can do the design?
- What is the measure of success?

Hofstede's Cultural Dimensions

- Dutch cultural anthropologist
- Investigated 53 countries, 1978-1983
- Identified 5 cultural dimensions
 - Power Distance
 - Individualism vs. Collectivism
 - Masculinity vs. Femininity
 - Uncertainty Avoidance
 - Long- vs. Short-Term Time Orientation

Power Distance

- *High Power Distance* cultures believe that the more powerful people must be deferred to and not argued with, especially in public
 - Based on gender, age, seniority, position
- *Low Power Distance* cultures believe ideas/people are assumed to be equal

Power Distance

High Power Distance
(104)



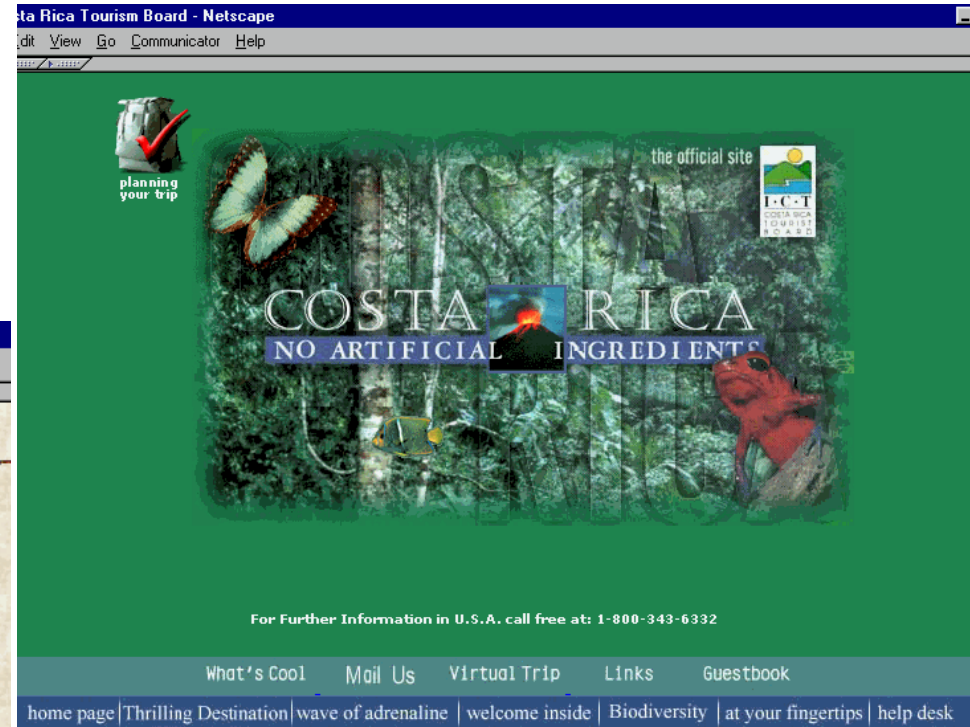
Low Power Distance (38)



Individualism vs. Collectivism

- *Individualistic* cultures believe in loose ties: every one is expected to look after one self or one's immediate family but nobody else.
(privacy, freedom, challenge, honesty,...)
- *Collectivist* cultures believe that people are part of a strong, cohesive group, and should look out for each other.
(training, harmony, equality, maintain face, ..)

Individualism vs. Collectivism



Costa Rica, Collectivist
Emphasis on nature

USA, Highly individualist
Emphasis on the visitor

Masculinity vs. Femininity

Gender roles, NOT physical characteristics

- Masculine roles
 - assertiveness
 - competition
 - toughness
- Feminine roles
 - home and children
 - people
 - tenderness

Example masculinity indices:

95 Japan

79 Austria

62 USA

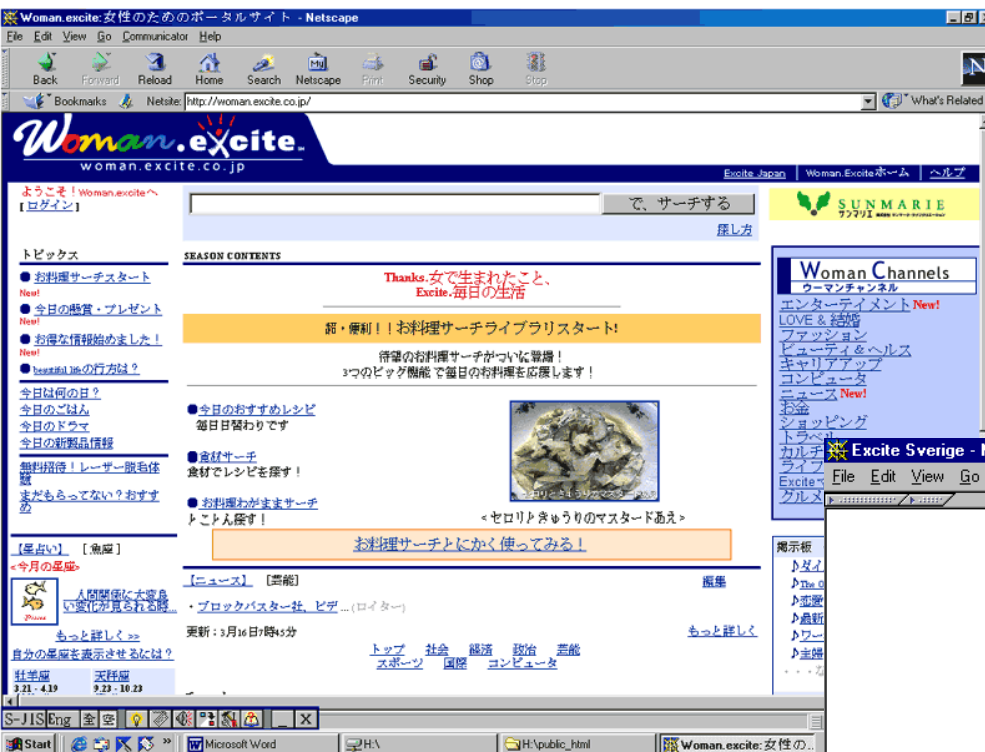
43 France

39 South Korea

05 Sweden

Masculinity vs. Femininity

Japan, High masculinity
Search portal for women



Sweden, low masculinity
Same search portal.
No distinction in gender and
age



Uncertainty Avoidance

- The extent to which people feel anxiety about uncertain or unknown matters

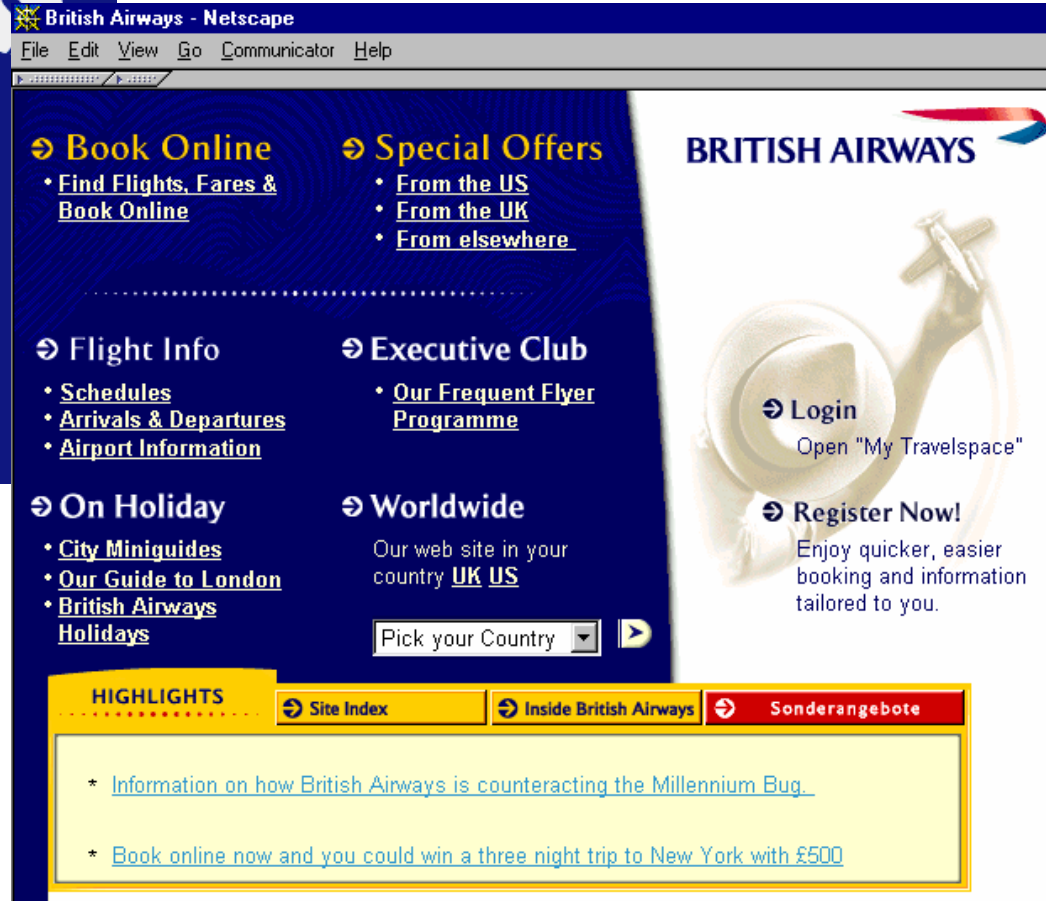
(E.g. time for appointments)

High uncertainty avoidance: formal rules, active, emotional, aggressive, talk with hands, experts need to know all answers

Low uncertainty avoidance: informal, quiet, relaxed, it is ok not to know the answer

Uncertainty Avoidance

Belgium, high UA (94)
Simple, limited choice



UK, lower UA (35)
More choice, more complex

Long- vs Short-term time orientation

- Long-term (Asian countries):
 - Older people have more authority than younger people (and often men more than women)
 - Practice and search for Virtuous behavior
- Short-term (Western countries):
 - Equal relationships (though elderly often treated worse)
 - Belief and the search for truth

Long- vs Short-term time orientation

SIEMENS

English 联系人 主页

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China, long term
(Lt=118)
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needed

Germany, short term (Lt=31)
Achieve goals quickly

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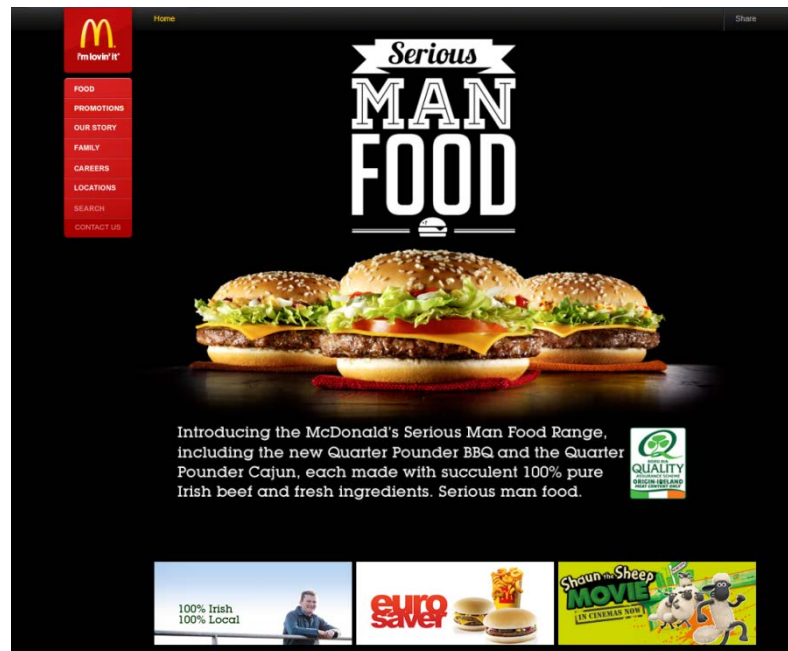
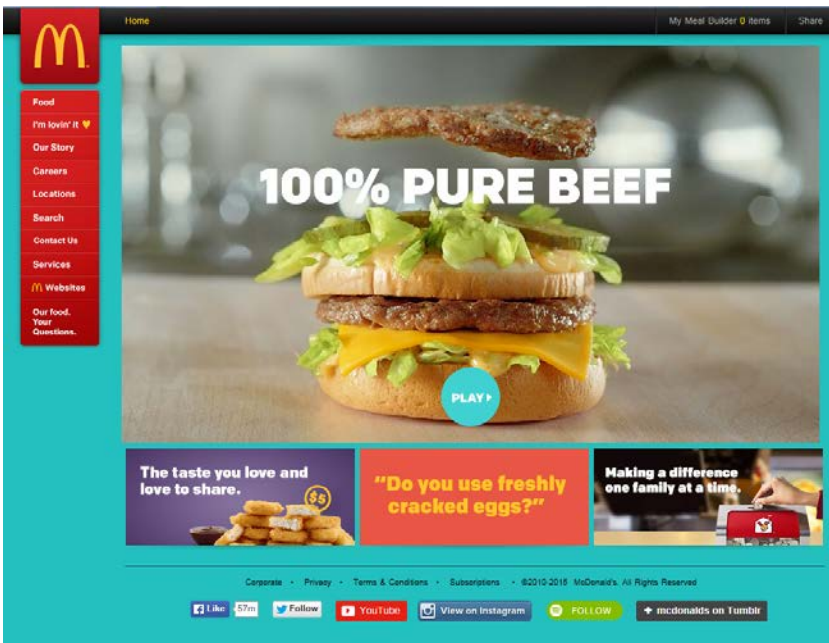
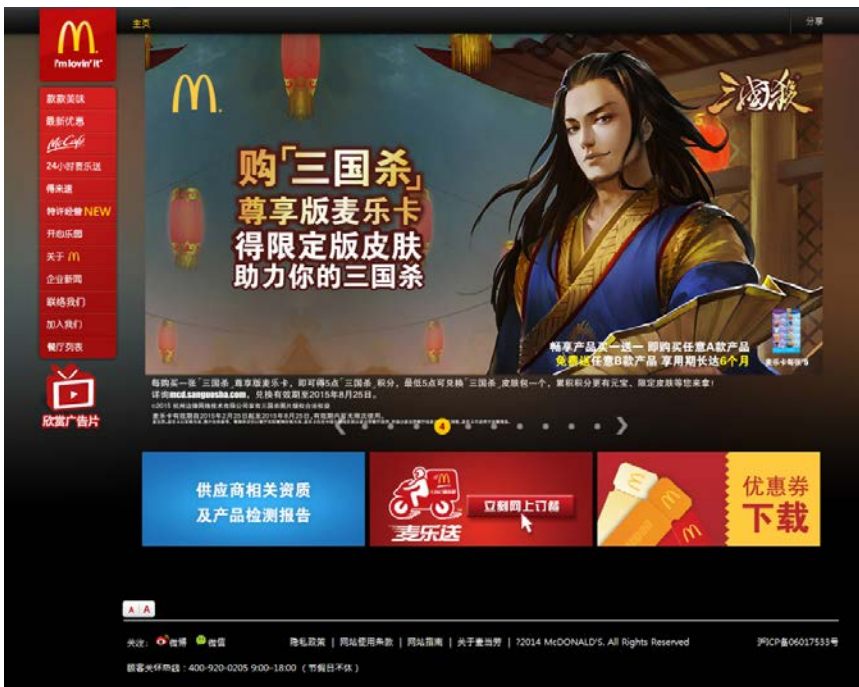
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Verkehr
Medizin
Bauelemente
Licht
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Finanz- und
Immobilien-geschäft
Weitere Angebote
Produktindex



Ob Diagnosegeräte für Arztpraxen und Kliniken, Datennetze für globale Unternehmen oder Anlagensteuerungen für große Fertigungsstraßen: mit unserem einzigartigen Spektrum aus allen Gebieten der Elektrotechnik und Elektronik sind wir wie kaum ein anderes Unternehmen in der Lage, Ihnen maßgeschneiderte Lösungen "aus einer Hand" anbieten zu können. Testen Sie uns!

Some examples

- How different do you think websites of McDonalds, KFC will be in different countries?
- What differences do you expect?



03-2015
China,
Kuwait,
US,
Ireland

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03-2015
China,
Arabia,
US,
Netherlands

User Testing

- Identify people living in the target locale to help recruit users, schedule tests, and find translators
- Localize the test:
 - Test scenarios
 - Introduction
 - Informed-consent document
- Conduct the testing in the target language
- Allow more time for testing