

## Introduction

This report analyzes the cross-cultural effectiveness of Red Bull's American and Chinese websites and how Red Bull applies similar ideas to cater to additional cultures. Although increasing numbers of people are connected by globalization, people from different cultures have varying preferences while browsing the internet. In particular, the design of webpages affects how users from different cultures perceive companies and their products. For this study, we have selected several applicable cross-cultural variables to analyze these websites. We focused on high versus low context communication, individualism versus collectivism, and levels of trust and sociality for these cultures. By localizing their website designs for American and Chinese consumers, Red Bull effectively considers these cultural variables in order to cater to their different groups of consumers. We begin this report by reviewing literature relevant to establishing our targeted cultural variables before defining our methods of analysis. Then, we present our results and discussion before ending with a conclusion and recommendations for Red Bull to repeat their success in future localizations.

## Literature Review

In analyzing the cross-cultural effectiveness of Red Bull's websites, this report focuses on three cultural variables established by previous scholarly research: high versus low context, individualism versus collectivism, and trust and sociality. Additionally, this report develops an algorithm to effectively evaluate navigation difficulty from one page to another, as elaborated in the methods section.

### High and Low Context

One useful variable we observe is high- versus low-context webpage design. People from higher context cultures typically prefer more information relevant to the task at hand, while people from lower context cultures are more comfortable with using inference when browsing less informative web pages. Previous studies conclude that the United States has a low-context culture while China has a high-context one that prefers to be eased into new situations [1].

### Individualism and Collectivism

Designers also consider cultures' tendencies towards individualism or collectivism when designing cross-cultural web pages. In individualistic societies, people tend to act on their own and value individual goals and achievements, whereas people from collectivist societies are more accustomed to working together to achieve their goals. According to a 2009 study, American people significantly prefer individualistic web pages while Chinese people prefer pages designed with collectivism in mind [2].

### Trust and Sociality

Trust and sociality are less-often considered when designing cross-cultural web pages, but both are relevant when comparing the United States and China. These variables relate to how comfortably users trust the authority of web pages and to what extent they expect social content as they browse. For example, users from low-trust cultures may prefer more information about the product or page they are

browsing, while those from high-trust cultures tend to implicitly accept the legitimacy of the product. Users from high-sociality cultures tend to prefer greater amounts of social elements, like social media, than users from low-sociality cultures. Existing research shows that the United States is a high-trust culture with high sociality, while Chinese culture is low-trust, and Chinese people tend not to expect social elements in web pages [3].

## Methods

The methods section presents the web pages and features we analyzed, the details of our methods, and the reasoning behind our chosen cultural variables to examine. We primarily focused on the homepages of the Red Bull websites in its American and Chinese localizations [4][5].

We selected American and Chinese cultures due to their largely different backgrounds, especially with regard to social and cultural norms and expectations. As the internet originated in western countries, many companies focus primarily on appealing to western culture. In practice, however, designs that understand cultural differences tend to fare better when appealing to new demographics. As China becomes increasingly globalized via the internet, companies seeking global success must understand how to effectively market and present their websites in a way that works with Chinese culture.

In analyzing whether each page was more targeted at a high- or low-context culture, we focus on product references and navigation difficulty. To evaluate each page's focus on individualism versus collectivism, we concentrate on graphics showing real people and silhouettes of people. To assess their approaches to trust and sociality, we consider social elements like media content.

### Product References

We analyzed the contents of each homepage to determine whether it was more high- or low-context. We gathered data by counting the number of product references. We defined a product reference as a use of text or images that directly identifies their energy drink product, like an image depicting a Red Bull can or a link to product information. On the other hand, a reference to the Red Bull logo alone does not count. We compared the variables and recorded our interpretation.

### Navigation Difficulty

To quantify the relative difficulty of navigating from a website's home page to a specific content page--using links within the website--we developed an algorithm that outputs a value that we define as the Navigation Difficulty Index (NDI). For each individual click required throughout the navigation process from one page to another, the algorithm requires two metrics to output an index measurement: click zone ratio and scroll distance.

We define click zone ratio as the ratio between clickable area for navigation and total viewport area, determined by taking a screenshot of the page when the clickable area is within the viewport. We define scroll distance as the number of page-lengths below the viewport area that the clickable area occurs fully within. For example, if a 20x20 click zone is located 1200 pixels down from the top of a 800 pixel tall viewport, the scroll distance would be calculated as  $(1200 + 20) / 800$ , to account for the height of the click zone. If the content is within the initial viewport, meaning that no scrolling is required, scroll distance should be considered 1. Horizontal scrolling is outside the scope of this algorithm, as very few

sites displayed on modern monitors incorporate horizontal scrolling for navigation. Additionally, this algorithm does not cover excessively large clickable areas that exceed reasonable viewport dimensions, as such sizes are uncommon in navigational elements. As these input metrics vary with viewport size, navigation difficulty index values should be reported along with the size viewport in which they were calculated to enable others to reproduce results.

To determine webpage element dimensions and positions, we used the Firebug plugin in the Firefox web browser and executed code to determine absolute position for scroll distance [6]. We have included in the appendix a Python implementation of the navigation difficulty index algorithm, along with our specific use case.

## Human Images

We analyzed the homepage contents showing graphics of real people. We counted the images with real humans. We also further segregated images that only had real humans and not game characters or silhouettes; we will compare the game characters and silhouettes in the next method. We counted that image as a single image, no matter how many people were in it. We did not include duplicate images that occurred twice or more in the page by our count. We also counted the number of named versus unnamed people on the pages.

## Silhouette Images

We analyzed the homepage for silhouettes of people. Silhouettes are defined as dark shadows and resemble humanoids; in the context of the Chinese page, they can be found animating a sport like soccer. We counted the number of silhouettes for each page.

## Social Elements

We analyzed the homepages for social elements. We defined a social element as any web page element that linked to a story about a sport, athlete, event, or endorsement. Every social article was counted.

We also analyzed the homepages for social media links. We define social media links as any web element directing to a 3rd party social website like Twitter or Weibo. We counted the social media links.

# Results and Discussion

In this section we present results and the corresponding discussion for each cultural variable we analyzed.

## High and Low Context

We present our high and low context analysis in terms of product references and navigation difficulty.

### Product References

Page content on Red Bull's homepages is represented very differently between the American and Chinese websites. Red Bull is a sports energy drink company, but that is not immediately apparent to a user browsing the American website. There is no information presented about the product; instead,

there is information about all of the different sports and events Red Bull sponsors. By comparison, the Chinese website has the actual product on the homepage, and it is immediately clear they are an energy drink company.

Higher context is indicated by a higher number of product references and lower context is indicated by a lower number of product references. The American website assumes the user knows about the product already and is low context as a result, while the Chinese website makes no assumptions, and instead provides context about the product, therefore making it high context. Red Bull's website designers appear aware of these cultural differences, as they clearly focus on Red Bull as the primary product on the Chinese page, while they emphasize sports and events on the American site.

## Navigation Difficulty

Red Bull's American and Chinese websites have very different navigation paths from home page to product page. While the product page is clearly accessible through a large link in the Chinese home page, the product page is considerably more difficult to find on the American version. Rather than having a clearly labeled product link, the American website has a small "Products & Company" link in one of three menu bars on the page. After following that link, users must scroll down to find the actual link to view Red Bull products. Our navigation difficulty index measurement reflects this difficulty: the Chinese website scores a 1.49, while the American website scores a 4.90, as presented in Figure 1.

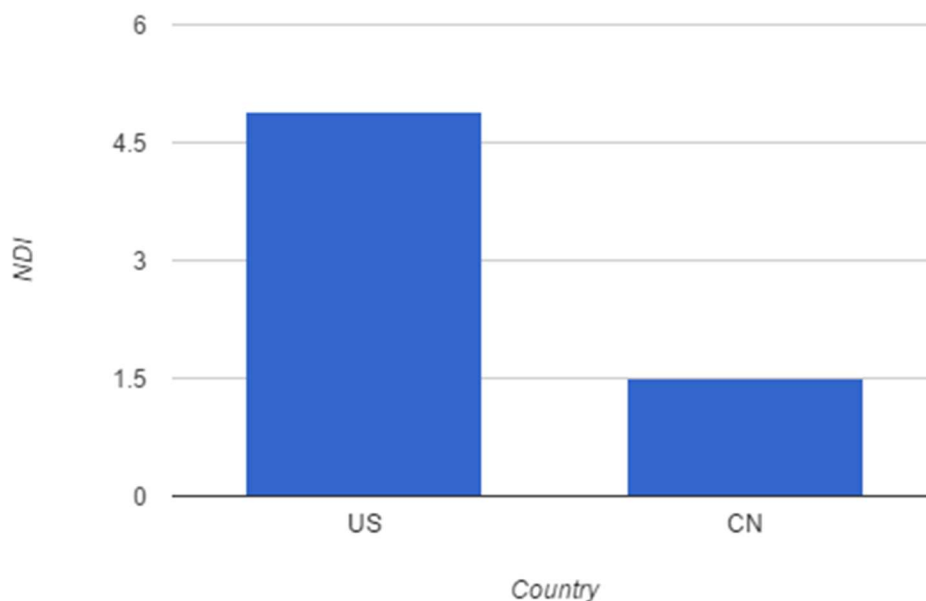


Figure 1: Comparison of navigation difficulty index (NDI) from homepage to product page

American and Chinese cultural preferences for high- or low-context are reflected by the difference in relative difficulty to navigate to the Red Bull product page in each version. As Chinese users are more accustomed to high-context web content, they expect to easily find information about the topic at hand, so Red Bull's website designers make this content obvious and accessible. American users, meanwhile,

are accustomed to low-context web content and have little desire to find the Red Bull product page, and the website designers therefore make little effort to locate it obviously, instead opting to focus users on more brand-related content like sports and sponsorships.

## Individualism and Collectivism

Red Bull's websites present both graphics showing real people as individuals, groups, and silhouettes of people to present ideas of individualism and collectivism.

### Human Images

The American and Chinese websites differ greatly on their representation on individuals. On the American homepage, there are ten instances of images showing individuals alone or athletes competing in solo sports events like ex such as skiing and snowboarding. All the athletes on the American site are named and idolized with an attached article. In comparison, there is only one image on the Chinese homepage that displays a solo athlete, and that athlete is unnamed and has no backstory; however, there are three images which picture more than one person. Figure 2 displays the differences between the numbers of human images presented on the homepages.

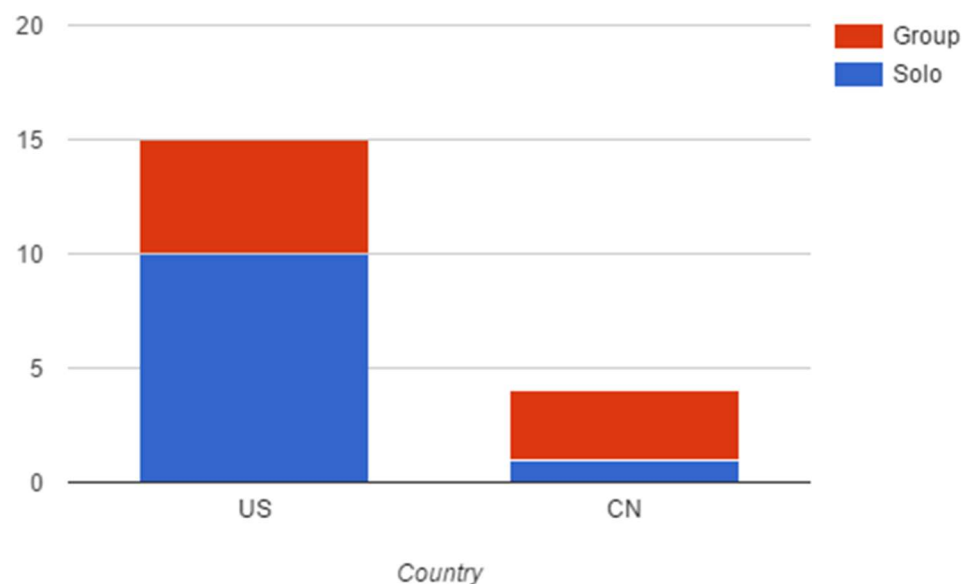


Figure 2: Comparison of human image frequencies on Red Bull homepages

Individualism is indicated by the number of images of solo activities and the number of named persons on the page; in other words, individualism relates to how many individual role model figures are presented. Collectivism is indicated by the number of images of group activities and number of unnamed people on the page.

The American website is promoting individualism with all of the instances of images showing people competing in their solo sports and by further identifying and giving a backstory to each of them.

Furthermore, the people pictured on Red Bull's American website are typically famous and successful, exemplifying ideal role models from an individualist perspective, which caters to American consumers. The Chinese website, however, lacks this individualism in its images. The absence of images promoting individuals and their identities and stories indicates a non-preference for individualism in China, and the Red Bull designers capture this difference in culture successfully.

## Silhouette Images

Another crucial distinction between the American and Chinese websites is in how they use of silhouettes of people. The American homepage does not make use of any silhouettes, but the Chinese website has five of them on the homepage background alone.

The Red Bull designers' use of silhouettes on the Chinese webpage emphasizes the antithesis of individualism: faceless, individually unimportant shadows. Individualism values one's ability to stand out among a crowd, but Chinese culture doesn't share this value with American culture. Respecting this difference of ideas, the Red Bull designers effectively capture the sportiness and energy of Red Bull without filling the Chinese web page with individualistic faces.

## Trust and Sociality

Social elements and product information are presented in terms of trust and sociality.

### Social Elements

The American page has a strong affinity for displaying sociality, while the Chinese page is more focused on the product itself. The American page presents 38 articles on sports, music, and more, along with the socially-fueled invitation to "explore the world of Red Bull". While, the Chinese homepage includes image links to videos and activities, it does not focus on that content like the American page does. Additionally, the American homepage has eight links to social media platforms, while the Chinese page has only one, as altogether shown in Figure 3.

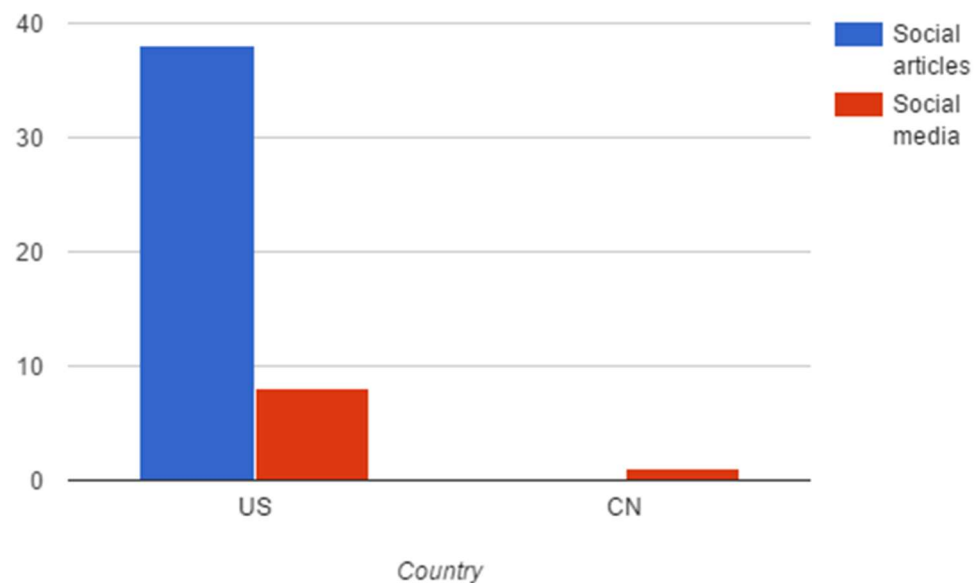


Figure 3: Comparison of social elements on Red Bull homepages

High sociality is indicated by a high amount of social articles and low sociality is indicated by a low amount of social articles. The American page assumes the reader will be interested in their social articles. This design decision displays high sociality and trust because instead of presenting information about their product, they simply focus on the athletes they sponsor. In comparison, the designers of the Chinese page present a homepage without social articles, displaying low sociality and trust and instead relying primarily on the product itself to entice the reader.

Social media links on the web pages further reflect this cultural difference in sociality. The designers of the American page clearly believe that social media presence is important, as shown by the many links, presented in bright colors on the page. The Chinese page, meanwhile, is almost entirely devoid of social media, reflecting the designers' awareness of cultural sociality. Furthermore, the decision to focus on social elements in the American page indicates that Red Bull is aware of their American consumers' trust in their product. The designers for the Chinese page, on the other hand, focus on building trust, as they are targeting a market where Red Bull is relatively unknown, compared to its market presence in the United States.

## Conclusions and Recommendations

Overall, our investigation of Red Bull's American and Chinese websites reveals the company's well-thought out design process that considers relevant cultural variables. According to our literary research, consumers in the United States prefer low-context, individualistic content that incorporates many social elements. Additionally, their trust for established brands fuels these preferences. China, meanwhile, prefers high-context, collectivistic content that seeks to build brand trust over emphasizing social inclinations. As we analyzed Red Bull's website content--both through conventional means of academic

inquiry and through the development of a new algorithm—we conclude that these differing cultural preferences are successfully addressed and fulfilled by these localized websites.

Although Red Bull effectively considers these cultural variables in their American and Chinese sites, many of Red Bull's other domain-localized websites lack unique design features to cater to their respective cultures. For example, the German, Russian, and Japanese Red Bull websites all use the same design as the American site, despite serving cultures that differ from one another. Red Bull's design team should investigate each culture's preferences for high or low context, individualism versus collectivism, and trust and sociality when making new website localizations. Future studies may wish to additionally analyze the color profiles of each culture in order to understand how a company could effectively apply relevant colors to its localized designs [7]. We hope this report is useful for both Red Bull and other researchers in implementing and understanding how to effectively create future cross-cultural websites.

## References

- [1] D. Kim et. al., "High- Versus Low-Context Culture: A Comparison of Chinese, Korean, and American Cultures," *Psychology & Marketing*, vol. 15, no. 6, pp. 507-521, Sept. 1998. [Online]. Available: <http://onlinelibrary.wiley.com/doi/10.1002/%28SICI%291520-6793%28199809%2915:6%3C507::AID-MAR2%3E3.0.CO;2-A/abstract>. [Accessed Feb. 29, 2016].
- [2] D. Cyr, "Website design, trust and culture: An eight country investigation," *Electronic Commerce Research and Applications*, vol. 12, no. 6, pp. 373-385, Nov. 2013. [Online]. Available: <http://www.sciencedirect.com/science/article/pii/S1567422313000215>. [Accessed Feb. 29, 2016].
- [3] G. Gevorgyan and N. Manucharova, "Does Culturally Adapted Online Communication Work? A Study of American and Chinese Internet Users' Attitudes and Preferences Toward Culturally Customized Web Design Elements," *Journal of Computer-Mediated Communication*, vol. 14, no. 2, pp. 393-413, Jan. 2009. [Online]. Available: <http://onlinelibrary.wiley.com/doi/10.1111/j.1083-6101.2009.01446.x/full>. [Accessed Feb. 29, 2016].
- [4] *Red Bull USA*. [Online]. Available: <http://www.redbull.com/us/en>. [Accessed Feb. 29, 2016].
- [5] *Red Bull China*. [Online]. Available: <http://www.redbull.com.cn/>. [Accessed Feb. 29, 2016].
- [6] jakub.g, Answer to "firebug - get absolute coordinates," *Stack Overflow*, June 2012. [Online]. Available: <http://stackoverflow.com/a/10922099/1>. [Accessed Mar. 6, 2016].
- [7] G. Vitols et. al., "Colour Extraction and Analysis Solution for Design of Cross-cultural Websites," *Procedia Computer Science*, vol. 77, pp. 215-220, Jan. 2016. [Online]. Available: <http://www.sciencedirect.com/science/article/pii/S1877050915038843>. [Accessed Mar. 5, 2016].



## Appendix A - Red Bull USA

RED BULL US

RED BULL TV

REDBULLETIN.COM


ATHLETES

EVENTS

CARTOONS

PRODUCTS & COMPANY

SHOP



Adventure

Bike

eSports

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### Watch What Goes Down When The Eddie Runs

Go behind-the-scenes of the most famous big-wave event in the world.


By Chris Binnis on 4 March 2016

RUGBY

### Rugby's Fastest Man Sprints Down Memory Lane

HOCKEY

### This Woman Is the Wayne Gretzky of Women's Hockey



### Watch This to Feel Like You're on Top of the World


By Alison Mann on 3 March 2016

ADVENTURE SEEKERS What does it feel like to climb high in the Himalayas? Find out in David Lama's thrilling POV video.

### Gallant Drops New Song From Upcoming 'Ology' Album

By Elliott Sharp on 2 March 2016

RED BULL SOUND SELECT Following his collab with Jhené Aiko, the Coachella-bound Gallant is back with another banger.




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ALL-NEW 2016

### CIVIC


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### 8 Cities, 1 Banger Skateboarding Edit

By Niall Neeson on 2 March 2016


SKATEBOARDING Maxim Habanec's "Skate Of Mind" series has wrapped, and these are his greatest hits.



### Take a Run Down the U.S. Open Slopestyle Course

By Jason Horton on 3 March 2016

SNOWBOARDING Here's a top-to-bottom look at the U.S. Open Slopestyle course, with Red Gerard and Hailey Langland.




### So Close: Dungey & Musquin Discuss the Atlanta SX

By Eli Moore on 1 March 2016

MOTOCX The teammates hash out the controversial race that Musquin relinquished to Dungey on the last lap.

### WHAT'S NEW ON



Live in 16 hours, Mon 12:00 PM

### Pennywise

Friday, 6:00 PM **LIVE**


### Crankworx 2016: Triple Crown of Slopestyle

Also available on

Google Play App Store Apple TV XBOX 360

FEATURED EVENTS

UPCOMING EVENTS






Friday Mar 18

### Ultra 2016 Music Festival

301 Biscayne Blvd., Miami, FL

On till Sunday 20 March



## Explore the world of Red Bull

### ESPORTS



#### Casuals: Spooky, the Hard-Boiled Streamer

- CS:GO: Fnatic's Second Act
- Friendlies: NAKAT, the Multi-Faceted

### ADVENTURE



#### Watch This to Feel Like You're on Top of the World

- How to Shoot Amazing Photographs - While Skydiving
- Get Airborne for This Incredible Leap Day Video

### MOTORSPORTS



#### Elimination and Halos: F1's Wild New Regulations

- 12 Amazing Air Race GIFs to Jump-Start the Season
- So Close: Dungey & Musquin Discuss the Atlanta SX

### BIKE



#### How Far Would You Go to Shoot the Perfect Photo?

- BMX Rider Mike 'Hucker' Clark Is Livin' the Dream
- Crazy POV From Drew Bezanson's Uncontainable Video

### MUSIC



#### Gallant Drops New Song From Upcoming 'Ology' Album

- 19-Year-Old Producer Who Worked With Ty Dolla Sign
- Hear Jazz Cartier's New Album, 'Hotel Paranoia'

### SURFING



#### Will Your Next Surf Trip Be To Germany?

- The Gold Coast Delivers, Yet Again
- We Live Streamed Pipeline, and Here's What We Saw

### SKATE



#### 8 Cities, 1 Banger Skateboarding Edit

- Meet Skateboarding's Brothers From Brazil
- Rest in Peace, Love Park

### SNOW



#### Take a Run Down the U.S. Open Slopestyle Course

- Who Will Go the Biggest at the U.S. Open Halfpipe?
- Candide Thovex and the Best POV You'll Ever See

### GAMES



#### FIFA 16 Career Mode: La Liga wonderkid XI

- Let's rank every Zelda game ever made
- Quantum Break's time to shine on Xbox One



It's all about catching air and going fast

Get to know Mike 'Hucker' Clark >

#### UPCOMING EVENTS

Saturday Jan  
**30**  
**Red Bull All Snow**  
New Jersey, Pennsylvania, Vermont,  
New Hampshire  
On till Saturday 2 April

Friday Mar  
**04**  
**Red Bull Culture Clash 2016**  
On till Friday 17 June

Wednesday Mar  
**09**  
**European Freeski Open**  
Laax, Switzerland  
On till Saturday 12 March

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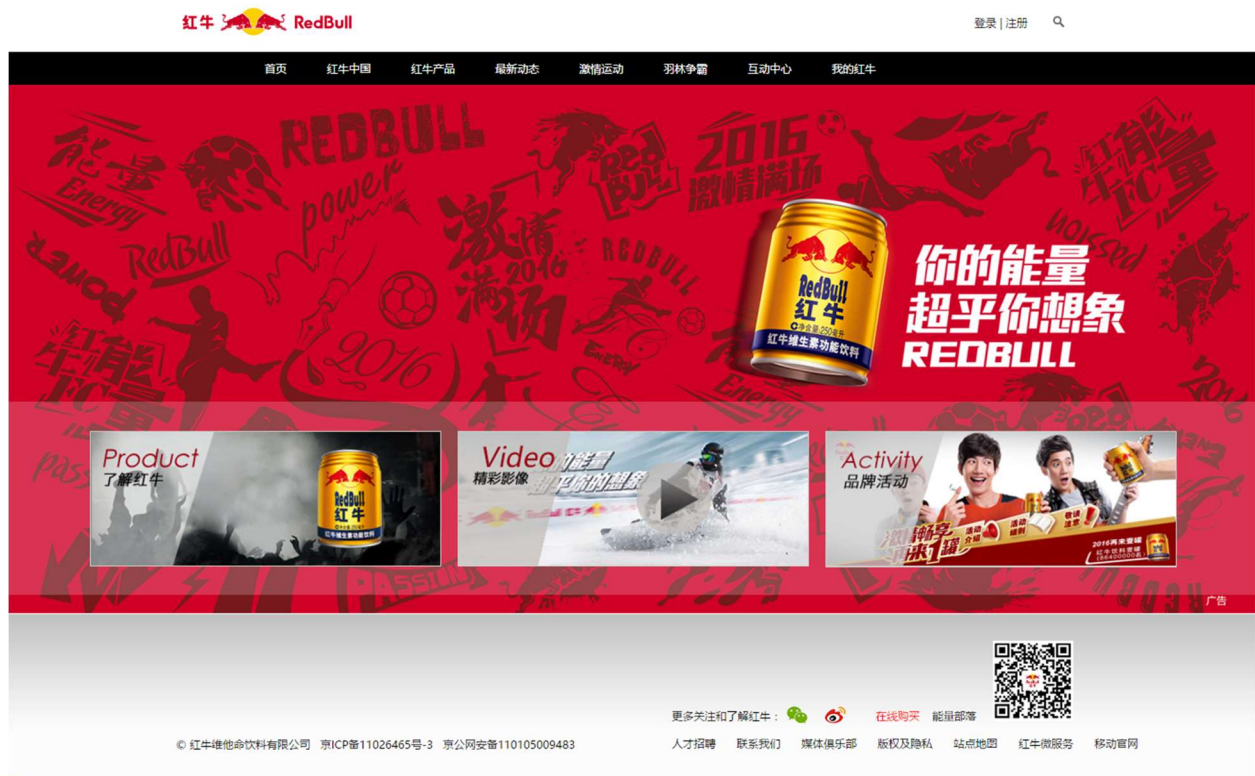


International Editions: EN ES

Location: United States

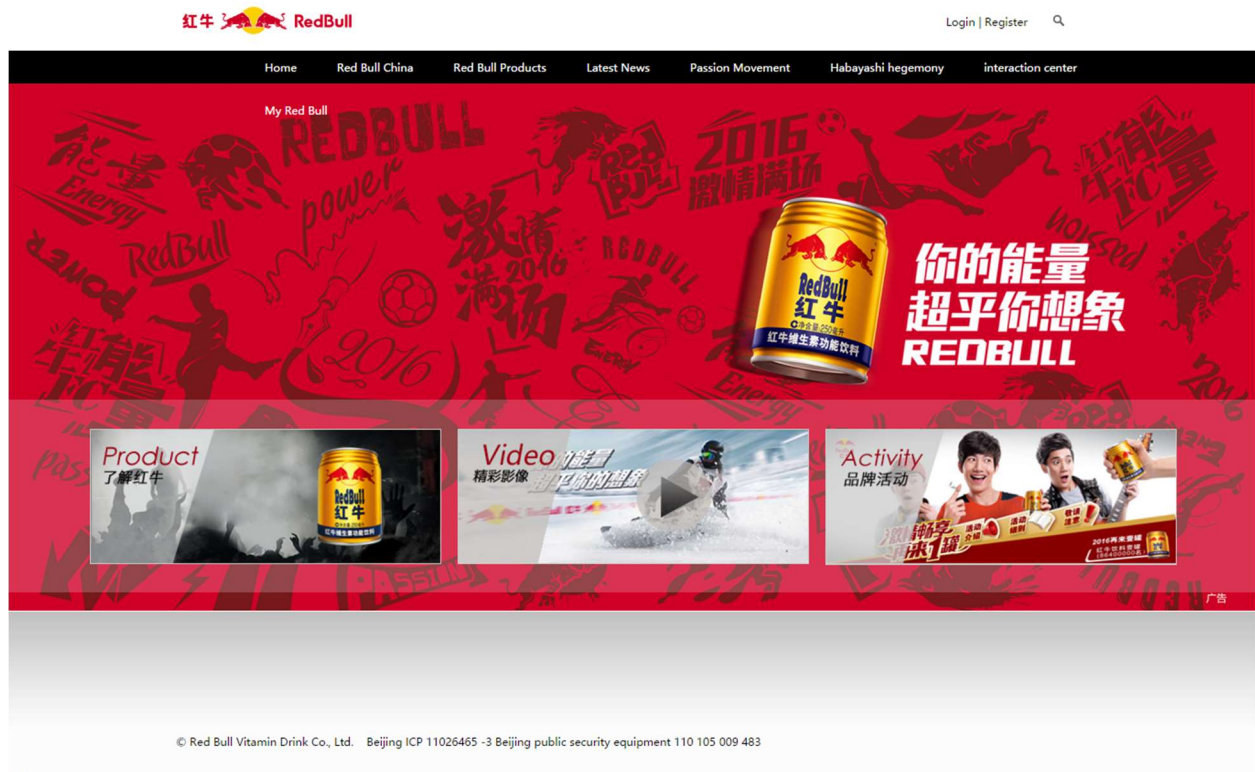
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## Appendix B - Red Bull China Original





## Appendix C - Red Bull China Partial Translation



## Appendix D - Navigation Difficulty Index Algorithm and Usage

```
def compute_ndi(click_zone_ratios, scroll_distances):
    """
    Compute the navigation difficulty index from one web page to another web
    page derived from the click zones and scroll distances necessary to navigate
    through the web site. Click zone ratio is defined to be the ratio between
    the click zone area and the viewport area. Scroll distance is defined to be
    the number of page-lengths below the viewport area that the click zone area
    occurs fully within. Additional details and restrictions are outlined in the
    Methods section of the enclosing report.

    Click zone ratio and scroll distance inputs are assumed to be of the same
    array length.
    :param click_zone_ratios: An array of click zone ratios, each calculated as
    click zone area / viewport area. Values should be between 0 and 1.
    :param scroll_distances: An array of scroll distances, each calculated as
    the number of page-lengths below the viewport that the click zone occurs
    fully within. Values should be 1 if no scroll is necessary.
    :return: The navigation difficulty index (NDI).
    """
    ccf = 1.0 # cumulative click factor
    clicks = len(click_zone_ratios)
    for i in range(clicks):
        cz_ratio = click_zone_ratios[i]
        sd = scroll_distances[i]
        ccf *= cz_ratio
        ccf /= sd
    import math
    ndi = math.log10(1 / ccf)
    return ndi

# example input, determined in a 1920x918 viewport in Firefox with Firebug
us_click_zone_ratios = [0.0032, 0.0056]
us_scroll_distances = [1.0, 1.42]

cn_click_zone_ratios = [0.032]
cn_scroll_distances = [1.0]

us_ndi = compute_ndi(us_click_zone_ratios, us_scroll_distances)
cn_ndi = compute_ndi(cn_click_zone_ratios, cn_scroll_distances)

print('US NDI: %.2f' % us_ndi) # 4.89895033905695
print('CN NDI: %.2f' % cn_ndi) # 1.494850021680094
```