

Content Sharing in Global Organization: A Cross-Country Perspective

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Abstract

Even though multilingual content is being offered in country-specific websites, the difficulty of propagating content updates between the websites makes content sharing problematic. This study presented a qualitative analysis on collaboration for content sharing in global organizations with the goal of content consistency. Examining content from the content categories revealed patterns of content sharing that resembled the processes of Internationalization, Regionalization and Localization. The integration of patterns of content sharing in collaboration illustrated several benefits i) scaling content specificity for global, regional or local communities ii) propagation of content updates confined to the communities and iii) synchronization of content updates in several languages, both globally and locally (some websites offer multiple languages).

1 Introduction

Global web presence is a key strategic response of organizations desirous of promoting their business internationally. To cater to the geographically dispersed customers, global organizations are attempting to establish country-specific web presences in which the design, language and content suit the target country [3]. The global organization in average publishes more than 100 country-specific websites in 43 languages [27]. Despite the obvious advantage of a competitive edge in the global market, offering content in multiple languages in several countries demands content consistency be maintained among the websites, a significant managerial overhead.

Inconsistencies in content shared between the country-specific website are common due to inadequate propagation of content updates; this results in omitted content and conflicting content between the websites. The presence of such inconsistency

showcases inefficiencies in the collaboration needed to share content between websites. From the technical perspective, it is crucial to investigate the attributes of collaboration that can support consistent content sharing between websites.

Web globalization often places an emphasis on country-specific web presence; content is adapted to suit the cultural norms of each locale [3, 7, 11, 16, 22]. Management focus is, therefore, inclined towards strategies that assign cultural adaptation responsibilities to the country offices [4, 23, 27]. Furthermore, the application of global design templates with the addition of several constraints is the preferred hybrid strategy for generating country-specific websites [12]. Though attention is focused on balancing global consistency against local flexibility in the design and cultural adaptation; the multilingual content that forms the organizations core message, also needs to be managed. Particularly if the same content is to be shared among different localities, it is necessary to carefully track the content so that the content updates can be propagated to the appropriate websites.

The objective from this research is to present a qualitative analysis on the collaboration in global organization for sharing content between the country-specific websites. From this research, we are able to illustrate the patterns of content sharing between the country-specific websites that resembles the processes of Internationalization, Regionalization and Localization. At a granular level, the combination of identified patterns of content sharing also revealed the processes of Glocalization. Associating the patterns in collaboration for content sharing is also illustrated to ensure the propagation of content updates in same language or in several languages offered within a country-specific website or between the country-specific websites to avoid content inconsistencies.

This paper is organized as follows. Section 2 presents a motivating example to illustrate the cases of inconsistencies in content offered in the country-

Table 1: Example of Inconsistencies in Content Between Country-Specific Websites

US - en	Canada - en	Switzerland - de
3M at a Glance (Year-end 2013) <ul style="list-style-type: none"> Global sales: \$30.8 billion. International (non-US) sales: \$19.7 billion Operations in more than 70 countries. 3M products sold in nearly 200 countries. 88,667 employees globally. 2013 3M gives cash and product donations 	3M at a Glance (Year-end 2013) <ul style="list-style-type: none"> Global sales: \$30.8 billion. International (non-US) sales: \$19.7 billion (64 per Operations in more than 70 countries. 3M products sold in nearly 200 countries. 88,667 employees globally. 2013 3M gives cash and product donations totalled 	3M auf einen Blick (Ende 2012) <ul style="list-style-type: none"> Weltweiter Umsatz: 29,9 Mrd. US-Dollar Umsatz ausserhalb der USA: 19.4 Mrd. US-Doll. Niederlassungen in über 70 Ländern, davon 40 Laboratorien 3M Produkte werden in knapp 200 Ländern ver 87.677 Mitarbeitende weltweit
	Canada - fr 3M en bref (exercice 2013) <ul style="list-style-type: none"> Ventes mondiales : 30,8 milliards de dollars Ventes internationales (pays autres que les États-Unis) : 19,4 milliards de dollars La société dispose d'installations dans plus de 70 pays Nombre de pays où 3M vend des produits : près de 200 Nombre d'employés : 88 667 	Switzerland - fr 3M en bref <ul style="list-style-type: none"> Chiffre d'affaires mondial: 29,9 milliards de dollars CA international (sans USA): 19.4 Mrd. milliards de dollars (d'affaires total) Filiales dans plus de 70 pays, avec 40 sites et usines Les produits 3M sont vendus dans env. 200 pays Plus de Arrondi 87'500 employésés

(a) Content Updates Not Propagated (b) Content Conflict (c) Content Missing

specific websites. Section 3 presents the literature review and hypothesis for this study. The research methodology is presented in Section 4. The detailed research findings are discussed in Section 5 with the verification of hypothesis in Section 6. Finally we make a conclusion in Section 7.

2 Motivating Example

To illustrate the cases of inconsistencies in content offered in the country-specific websites, we present the screenshot of the content “3M at a Glance” that is shared between the country-specific websites for US, Canada and Switzerland. The content is offered in the global website of 3M and is shared in its 100 country-specific websites.

From Table 1, it is clear that the content is offered in the official languages of the respective countries. In cases, where the countries have multiple official languages (such as Canada with English and French language) the content is also synchronized between the languages. The content in the shared official language (English) is reused between the country-specific website for US and Canada. In such a setting where content is shared in same language between the websites and synchronized between the official languages following problems can be compiled.

(a) Content Updates Not Propagated. Table 1 illustrates that the content updates for the year 2013 is shared between the country-specific websites for US and Canada and synchronized between the

offered languages in English and French, but the content in country-specific website for Switzerland is still not updated in the offered Deutsch and French languages. This case illustrates the lack of propagation of content updates in the languages offered between the country-specific websites.

(b) Content Conflict. The case of content conflict between the languages offered within a country-specific websites are also illustrated from the content (Deutsch and French) offered in country-specific website for Switzerland. Though the content is not updated with respect to the content offered at other country-specific websites, there is also conflict in the statistics for the number of employees between the languages. In addition to this, the content in the shared language (French) offered at both country-specific websites for Canada and Switzerland provide conflicting content from the lack of propagation of content updates between the websites.

(c) Content Missing. Though the content updates are propagated in the shared language (English) between US and Canada, the content in French is not completely synchronized with the content in English offered at Canada. This illustrates a case when the content is partially missing between the languages though the content updates are propagated in the shared language between the country-specific websites.

The problems illustrated from the example highlight on the inconsistencies in content that can occur from the lack of propagation of content updates

between the country-specific websites. The collaboration for content sharing between country-specific websites therefore has to ensure the propagation of content updates for content consistencies when offering content in their official languages. Furthermore, the integration of multilingual service platform such as Language Grid¹ to the collaboration offers possibilities for the translation of content updates using the language resources [10]. The next section presents the hypothesis for this study.

3 Research Hypothesis

Achieving a global presence is daunting given the varying perspectives on the role of culture. The view of cultural homogeneity across countries, arising from the dominance of western culture, favors the standardization of products and services across the globe [6, 13]. However, Hofstede's typology of culture clearly elucidates the differences in cultural values among countries, implying the importance of localizing the products and services so as to ensure cultural relevance to the local market [8]. Confounding the homogenizing effects of "international" culture, previous research in web globalization has emphasized cultural customization for effective web presence [3, 7, 11, 14, 22].

Besides cultural factors, research in business marketing also highlights the significance of administrative, regional and economic factors in applying or modifying global business strategies [5, 15]. Proximity in culture, geography, colonization history, past trading, and so on, is known to influence current business activities between countries. The socio-geographic factors in collaboration for the cross border knowledge flow among the organizational units have also been shown to be steps towards globalizing workforces [1]. In the context of web globalization, alongside cultural adaptation, the role of geography is rather limited when designing market-specific websites [21].

Exploring the geographical factors, the presence of country-specific websites in global organization serves as a podium for examining geographic context in sharing content between the countries. From the geographical lens, the relevance of content within a country or across the countries within a regional cluster is presumed to persist in the country-specific websites. On this context, web globalization is presented with the daunting task of managing the knowledge flow between the country-specific websites (e.g. propagation of content updates for consistent content sharing

between the countries)

Previous studies have presented web categories as a means to evaluate the efforts in web globalization such as standardized, proactive, global, localized and highly-localized websites [24, 25]. While the first three categories of websites provide same content for both domestic and international users; the remaining categories of websites provide localized content in each of its country-specific website. In relation to collaboration in global organization, the web categories presumably either depicts standardization in content sharing with the same content offered in entire country-specific websites or localization with localized content offered for target country and not shared between the country-specific websites. In addition to this, the content offered in multiple websites also illustrate content shared in varying proportion between them suggesting on the patterns of content sharing between the country-specific websites. The propagation of content updates between the websites is confined from such patterns of sharing content. To test for the existence of patterns, we set the following hypothesis.

H1 Content Sharing between the country-specific website is characterized with the patterns of content propagation.

Associating content propagation with the patterns enables collaboration for sharing content consistently from the propagation of content updates based on those patterns. In addition to this, the previous researches [9, 19] also presented views on the influences of culture in the content and design features in global websites. Country-specific website comprising of several such content features is also presumed to exhibit several propagations to other websites. It is therefore expected that varying level of managerial support is required in a country-specific website for the propagation of content updates. We set the following hypothesis to test for the existence of several patterns of content propagation from a country-specific website.

H2 Content in a country-specific website exhibit several patterns of propagation to other websites.

The goal of the stated hypotheses is to draw a relation between content sharing and the patterns of content propagation during collaboration. In doing so, the existence of patterns is assumed to enable consistent content sharing from the propagation of content updates. The result obtained from this study is also expected to expand our understanding

¹<http://langrid.org/en/index.html>

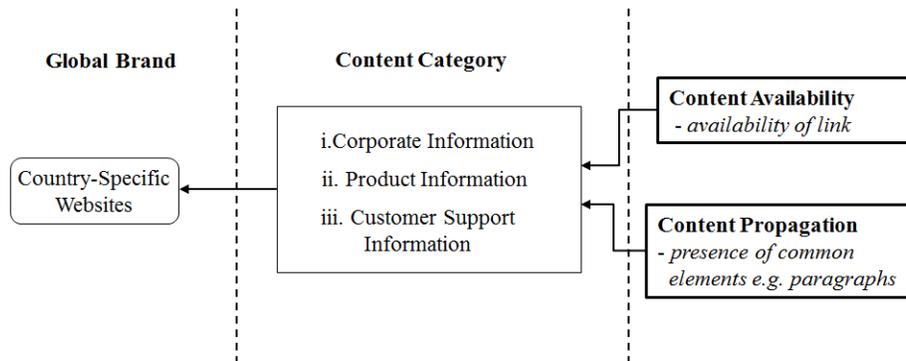


Figure 1: Framework in Examining Content Sharing

of web globalization from geographic perspective of localization. The following section presents a detailed study of the hypothesis.

4 Research Methodology

The methodology for the qualitative analysis of the content offered in the country-specific websites within a global organization is presented here.

4.1 Data Collection

For this study, the websites of global brands that are ranked amongst top 25 global websites from the web globalization report card is chosen [28]. From the ranking, the websites of four global brands Nivea², 3M³, Starbucks⁴ and Acer⁵ with different products and services offered worldwide are selected for this study. The chosen global brands have more than 40 country-specific websites with the contents offered in more than 20 languages.

A sample of 8 country-specific websites from each global brand representing countries from Asia Pacific, North America, Europe and Middle East-Africa are selected to illustrate content sharing across the geographical regions. The sampled country-specific websites for India, Australia, United Kingdom, Ireland, United States, Canada, Middle East and South Africa offer content in the shared language English. The country-specific websites for Canada and Middle East also offers content in French and Arabic languages respectively. In this study, we will investigate on the propagation of content offered in the shared language English between the country-specific websites.

²<http://www.niveaformen.com>

³<http://www.3m.com>

⁴<http://www.starbucks.com/site-selector>

⁵<http://www.acer.com/worldwide>

4.2 Content Categories

To study the propagation of content between the country-specific websites, first the content categories to sample content from the websites are identified. The content features in the corporate websites have been studied in [9, 19] to categorize content that provide general company information, financial information, support and employment information to the customer and so on.

The following content categories are reused in our study: “Corporate Information” in sampling content that provide company information such as mission statements, “Product Information” in sampling content on description, usage and specification of products and “Customer Support Information” in sampling content on ways to contact company or find answers to queries. The sampled content in the country-specific websites are manually analyzed to label them to the specific content categories.

4.3 Research Framework

Fig.1 outlines the framework in examining the relation between content from the content categories and its availability and propagation between the country-specific websites of the global brands. For the sampled content (“representing a webpage”) from each content category, first their availability across the country-specific websites is examined. Content Availability is defined as the presence of link to the content in the country-specific website. In the sampled content the availability of link is denoted with a tick (✓) and its unavailability is denoted with a dash (-). This is followed with examining the propagation of sampled content between the country-specific websites.

Content Propagation is defined as the flow of content between the websites with the purpose for sharing content updates. In the sampled content, the presence of common element e.g. a paragraph of text

Table 2: Content Availability and Propagation in Content Categories

Content Category	Global Brand (content)	Country-Specific Websites								
		IN	AU	UK	IE	US	CA	ME	ZA	
Corporate Information	Nivea (Imprint)	√	√	√	√	-	√	√	√	*
	3M (About 3M)	Y	Y	Y	Y	N	Y	Y	Y	**
	Acer (About Acer)	√	√	√	√	√	√	√	√	
	Starbuck (Mission Statement)	√	√	√	√	√	√	√	√	
		Y	Y	Y	Y	Y	Y	Y	Y	
		Y	Y	Y	Y	Y	Y	Y	Y	
Product Information	Nivea (Sensitive Face Wash)	-	√	√	√	-	√	√	√	
	3M (Multi-Touch Display C3266PW32")	√	√	√	√	√	-	-	-	
		Y	Y	Y	Y	Y	N	N	N	
	Acer (laptop Aspire S7)	√	√	√	√	√	√	√	√	
		Y	Y	Y	Y	Y	Y	Y	Y	
	Starbuck (Whole bean Medium Roast Kenya Coffee)	√	√	√	√	√	√	√	√	
		Y	Y	Y	Y	N	Y	Y	Y	
Customer Support Information	Nivea (FAQ)	√	√	√	√	√	√	√	√	
		Y	Y	Y	Y	Y	Y	Y	Y	
	3M (Contact 3M)	√	√	√	√	√	√	√	√	
		N	N	N	N	N	N	N	N	
	Acer (Support)	√	√	√	√	√	√	√	√	
	Y	Y	Y	Y	Y	Y	Y	Y		
	Starbuck (Coffee FAQs)	√	-	√	√	-	√	√	√	
		Y	N	Y	Y	N	Y	Y	Y	

*first row: content availability, **second row: content propagation, **IN**: India, **AU**: Australia, **UK**: United Kingdom, **IE**: Ireland, **US**: United States, **CA**: Canada, **ME**: Middle East country, **ZA**: South Africa.

between the websites is used as a threshold in determining the flow of content i.e. propagation has occurred between the websites. The propagation of content is denoted with (Y) while (N) denotes no propagation between the country-specific websites. Content availability and Content Propagation together bring insights on the publication of content and their confines in propagation to other countries. The research findings from this study are detailed next.

5 Research Findings

Table 2 illustrates the qualitative results from examining the availability and the propagation of content for the content categories “Corporate Information”, “Product Information” and “Customer Support Information”. The findings from this study are compiled in the following subsections.

5.1 Content Availability

It is found that the content from each content category are not standardized due to the differences in their availability in the country-specific websites of global brands. Table 2 illustrates the differences in availability of content for “Corporate Information” as the content is available at all country-specific websites of global brands 3M, Acer and Starbucks except for Nivea. The differences in the availability of content is also observed for the content categories “Product Information” and “Customer Support Information”. The content for “Product Information” is available at all country-specific websites only for Acer and Starbucks whereas the content for “Customer Support Information” is available at all country-specific websites of Nivea, 3M and Acer except for Starbucks.

The differences in the availability of content at the country-specific websites for the global brands sug-

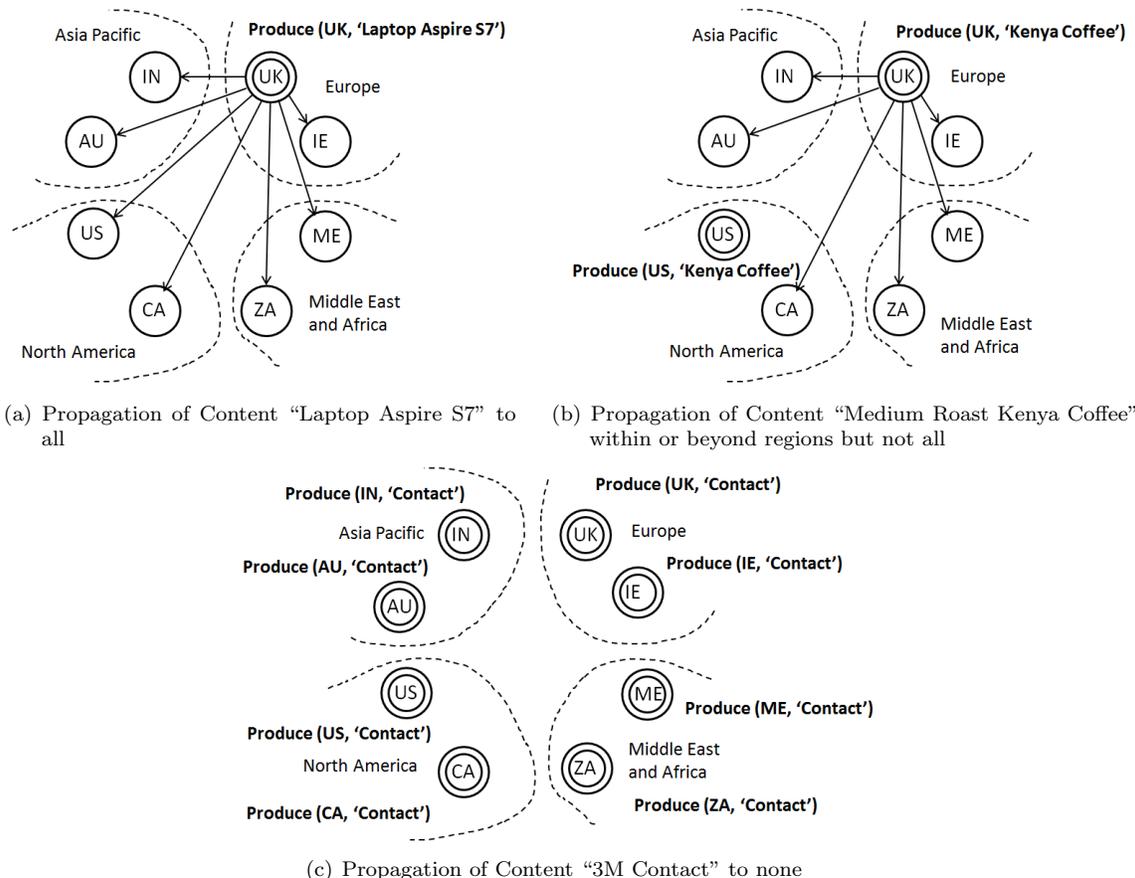


Figure 2: Cases of Content Propagation Between Country-Specific Websites

gest that there is no standardized approach for publishing content for specific categories. This finding also supports the study in [19] which suggested on the differences in content categories across cultural groups.

5.2 Content Propagation

From Table 2 the differences in the propagation of content between the country-specific websites for each content category are also observed. Table 2 illustrates the content for content category "Customer Support Information" propagated to all country-specific websites for global brands Nivea and Acer; while there is no propagation of content for 3M. This shows the differences in the propagation of content between country-specific websites of each global brand. Similar findings are made in the propagation of content from the content categories "Product Information" and "Corporate Information". The content for "Product Information" is propagated to entire country-specific websites only for Acer whereas the content for "Corporate Information" is propagated

to entire country-specific websites for 3M, Acer and Starbuck.

The differences in the propagation of content between the country-specific websites of each global brand also suggest that there is no standardized approach of content propagation from specific categories. The content from the content categories is further studied to extract the information on the patterns of propagation between the country-specific websites.

5.3 Pattern of Content Propagation

To study the patterns, we refer to the propagation of content from content categories in Table 2. As there are four content propagations from each content category, we have a total of 12 propagation examples that is examined for this study. These propagation examples are representatives of diverse global brands and several content categories. The following notations are used to illustrate the content propagation. As shown in Fig.2, the node represents the country-specific website, the directed edge repre-

sents the propagation of content between the country-specific websites and double circled node represents the country-specific website where the content is produced. We assume that the content is produced at the country-specific website for UK from the absence of publicly accessible information on content management for the chosen global brands. The dotted line represents various geographical regions.

5.3.1 Propagation Cases

From examining the propagation of the content, we identify three cases of propagation for content sharing (a) propagation to entire country-specific websites (b) propagation to multiple country-specific websites but not to entire country-specific websites and (c) no propagation between the country-specific websites (illustrated from Fig.2). Interesting results for the suitability of content in the geographical regions and the confines on the propagation of content updates for synchronization between languages are observed from the identified cases.

(a) Entire country-specific websites. Fig.2.a. illustrates the propagation of content “Laptop Aspire S7” from the content category “Product Information” produced at country-specific website for UK and propagated to all country-specific websites in various geographical regions. This case of content propagation stresses on (i) suitability of the content for all geographical regions (ii) content with a global reach shared at multiple country-specific websites and (iii) propagation of content updates at entire country-specific websites for consistent content sharing. The global reach of content also suggest on the synchronization of content updates in several languages offered in entire country-specific websites.

(b) Within or beyond regions. Fig.2.b. illustrates the propagation of content to multiple websites but not to entire country-specific websites with the content “Medium Roast Kenya Coffee” which is propagated to entire country-specific websites except for country-specific website US. From the geographical perspective, this case highlights on (i) suitability of the content with a regional reach shared to countries within or beyond regions.

From inter-regional view, the content is propagated from country-specific website for UK in regional cluster Europe to the countries belonging to the regions: Asia Pacific, North America and Middle East-Africa. From the intra-regional view, the content is propagated from country-specific website for UK to Ireland within the same region. The inter-regional and intra-

regional suitability of content sharing within regions or beyond geographical region can be used for the propagation of content updates between the country-specific website within the region or across the regions. The content “Medium Roast Kenya Coffee” is also locally produced at country-specific website for US which can be appended to country-specific website for UK from intra-regional suitability.

(c) Propagation to none. The case of no propagation between the country-specific websites is illustrated with the content “3M Contact” as shown in Fig.2.c. This case suggests on (i) suitability of the content to the specific locale where it is produced (ii) content with local reach not shared at multiple country-specific websites and (iii) content that are independently updated without requiring consistencies with other country-specific websites. Though it is logical that the content offered locally for a particular country-specific website may not be suitable for another country-specific website, this case highlights on the synchronization of content updates restricted to the languages offered within a country-specific website. For example content updates synchronized only between English and French languages within country-specific website for Canada.

5.3.2 Collaborative Content Sharing

From examining the cases of propagation, we generalized the patterns of content sharing that resembles the processes of Internationalization, Regionalization and Localization. Fig.3 illustrates the generalized patterns of content sharing in a collaborative setting between the administrators managing the content in the languages offered in their country-specific websites discussed below.

Internationalization. In previous studies, Internationalization as the processes for generalizing a product for handling multiple languages and cultural conventions is widely discussed [4, 27]. Fig.3.a. generalizes Internationalization pattern of content sharing in which the administrator can update the content in the offered language (L1) with content updates that are propagated to the languages (L2, L3 and L4) offered between the websites. Inconsistencies in content between languages is avoided from the propagation of content updates in entire offered languages.

Regionalization. The view on Regionalization represents a world that is less interconnected with

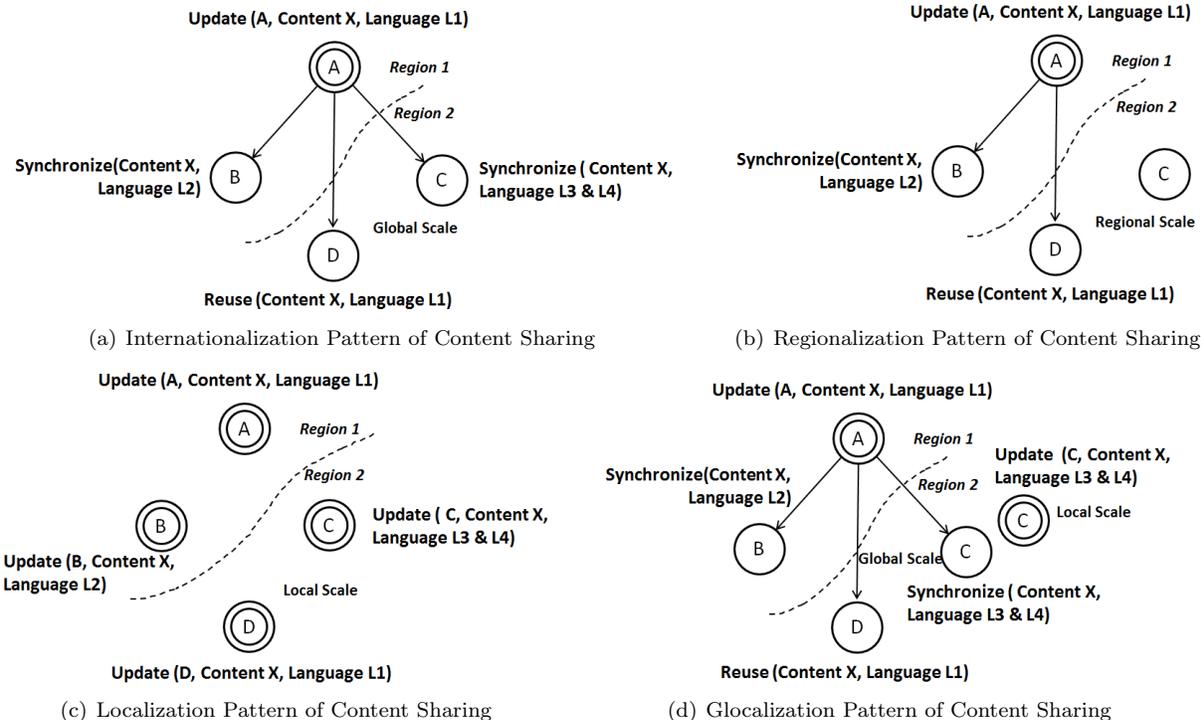


Figure 3: Content Updates Propagated Between Languages in Collaborative Content Sharing

a stronger regional focus and is interesting for researches on market segmentation [20]. Fig.3.b. generalizes Regionalization pattern in a collaborative setting in which content updates are synchronized in the languages (L1 and L2) for its intra-regional suitability. Inconsistencies in content that are relevant regionally is avoided from the propagation of content updates to countries either within a region or beyond regions.

Localization. The view on localization is towards the process for making a product linguistically and culturally appropriate to the target locale (country/region and language) where it will be used and sold [4, 23, 27]. Fig.3.c. generalizes localization pattern illustrating a collaborative setting in which content updates are synchronized only in the languages offered locally within the respective country-specific website without propagation between websites. For example content updates synchronized only in language L3 and L4 for country-specific website C. Inconsistencies in content that is locally managed is avoided from the propagation of content updates only in the languages offered within a country. To investigate the additional patterns of content sharing, we examined content at a granular level. For this, we examine the component content in a

webpage “About 3M” from 3M and examine its propagation between the country-specific websites. Four component content on “Who we are”, “Our value”, “3M at glance” and “3M in Country” with combinations for their suitability at global and local scales is found within a webpage. The case resembles **Glocalization** processes with the content communicating both globally and locally [14]. Fig.3.d. generalizes Glocalization pattern in a collaborative setting in which content updated by administrator for country-specific website (A) are shared globally in several languages (L1, L2, L3 and L4) but the content updated by the administrator for country-specific website (C) are only shared locally in languages (L3 and L4). The integration of such patterns with inconsistency detection mechanism as in [17] offer consistent content sharing with global content management systems.

6 Hypothesis Verification

From Table 2 it is possible to illustrate differences in content sharing between the country-specific websites from the depiction of patterns of content propagation. The Regionalization pattern for content “Sensitive Face Wash”, “Multi-Touch Display” and “Medium Roast Kenya Coffee” from content category “Product

Information” in Nivea, 3M and Starbucks illustrates content sharing with a regional focus. However, the Internationalization pattern in Acer illustrates content “Laptop Aspire S7” shared with a global focus which requires tracking content updates at each country-specific website. The difference in content sharing is also observed for the content categories “Corporate Information” and “Customer Support Information”. These qualitative results are convincing in supporting hypothesis H1 by illustrating differences in content sharing between country-specific websites characterized from the confines in the propagation of content updates.

Table 2 also illustrates propagation of content that are not standardized with respect to the content categories. Country-specific website comprising of several such content categories therefore exhibits several patterns of propagation. For example the country-specific website for UK from a global brand Nivea comprises of content from content categories “Customer Support Information”, “Corporate Information” and “Product Information” each depicting pattern of content sharing: Internationalization, Regionalization and Regionalization respectively. It is convincing that the patterns of content sharing are not unified in a country-specific website and hypothesis H2 is supported from the presence of several patterns of content sharing to other websites.

7 Conclusion

This research presented a qualitative analysis on the collaboration for content sharing in global organizations as depicted in their country-specific websites. The results are convincing in characterizing differences in content sharing between country-specific websites from the presence of several patterns of content propagation. From examining the content in different content categories, patterns of content sharing were revealed that resembled the processes of Internationalization, Regionalization and Localization. At a granular level, the combination of identified patterns of content sharing also illustrated the process of Globalization. Several benefits are illustrated from the identification of such patterns i) scaling the suitability of content for global, regional or local communities ii) propagation of content updates confined for consistent content sharing between the communities iii) synchronization of content updates globally in several languages offered on all country-specific websites or in the languages offered within a country-specific website. The pattern of content sharing in a collaborative setting is also illustrated in avoiding incon-

sistences from missing content, content not updated and conflicting content in the languages offered from the country-specific websites. The future work will explore the technical capabilities with the integration of patterns in the collaboration tools for inconsistency management in global content management systems.

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