WhP

Challenges of Arabic Localization
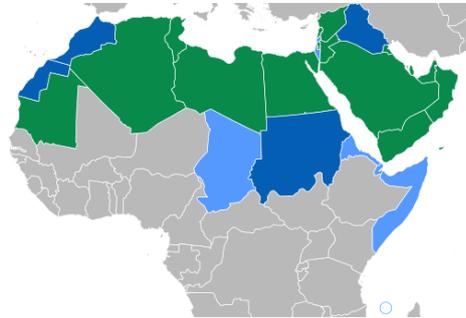
Introduction

Arabic sole official language (green); co-official language with a majority of native Arab speakers (dark blue); co-official language due to significant minorities (light blue). Source Wikipedia

Arabic is the world's fifth language in terms of number of speakers. It is the first language to more than 250 million people and about 280 million people use Arabic as their second language. Arabic is mostly spoken in the Middle East and North Africa. It is the primary language in Algeria, Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, United Arab Emirates and Yemen. It is also one of the official languages in the Chad, Comoros, Djibouti, Eritrea and Israel.

With a total population of 340 million people according to Wikipedia, the Middle East and North Africa region (MENA) represents a huge market. Despite (and because of) the political turmoil in the Middle East region, exports to non-Arabic countries are soaring. Many international companies are now well established or expanding in the Arab world in the software, digital, electronics, home appliances and automotive industries.

There is a political need for mutual understanding between the Arab world and the Western world. Arabic is one of the six official languages of the United Nations. The United States have clearly voiced the need to establish better relationships with the Arab Muslim world and reform foreign policies.

Localizing in Arabic is strategic, yet the region's instability and the technical challenges of the language bring up many questions, which we will try to address in this white paper: first we will look at the economic weight of the zone as well as the internet usage of its population, then at the political situation of the member countries as is stands in 2015; finally we will delve into the specifics of the Arabic language (bi-directionality, lacking technical terminology and shortage of expert translators) and how we handle its localization.

The economic weight of Arab countries

Natural resources, in particular oil and natural gas, are the principal source of wealth of the Arab countries. In 2012, they produced 35% of the world's oil and 15% of the world's natural gas. 40% of the resources are underground.

The tourism industry is the fastest growing sector, led by Egypt, the UAE and Lebanon. The telecommunications sector is also growing rapidly. Yet the economic development in the Arab countries hides wide gaps in growth rates. The rich oil states' per capita GDPs soar, like Qatar with $140,000, while Saudi Arabia is at $53,644, Egypt $11,089 and Jordan $11,783.

List of Arab countries by total GDP per capita (Nominal)

Rank	Country	Int$	Year
1	Qatar	140,000	2014
3	Kuwait	83,840	2012
7	United Arab Emirates	59,845	2012
9	Saudi Arabia	53,644	2013
14	Oman	45,334	2012
17	Bahrain	43,851	2013
54	Libya	21,046	2013
65	Lebanon	17,174	2013
75	Iraq	14,951	2013
80	Algeria	13,320	2013
86	Jordan	11,783	2013
91	Tunisia	11,125	2013
92	Egypt	11,089	2013
114	Morocco	7,198	2013
128	West Bank and Gaza	4,921	2012
135	Yemen	3,959	2013
140	Sudan	3,373	2013
143	Mauritania	3,043	2013
144	Cambodia	3,041	2013
145	Djibouti	2,999	2013
172	Comoros	1,446	2013

Source: World Bank (2011–2014) via Wikipedia (based on actual data)
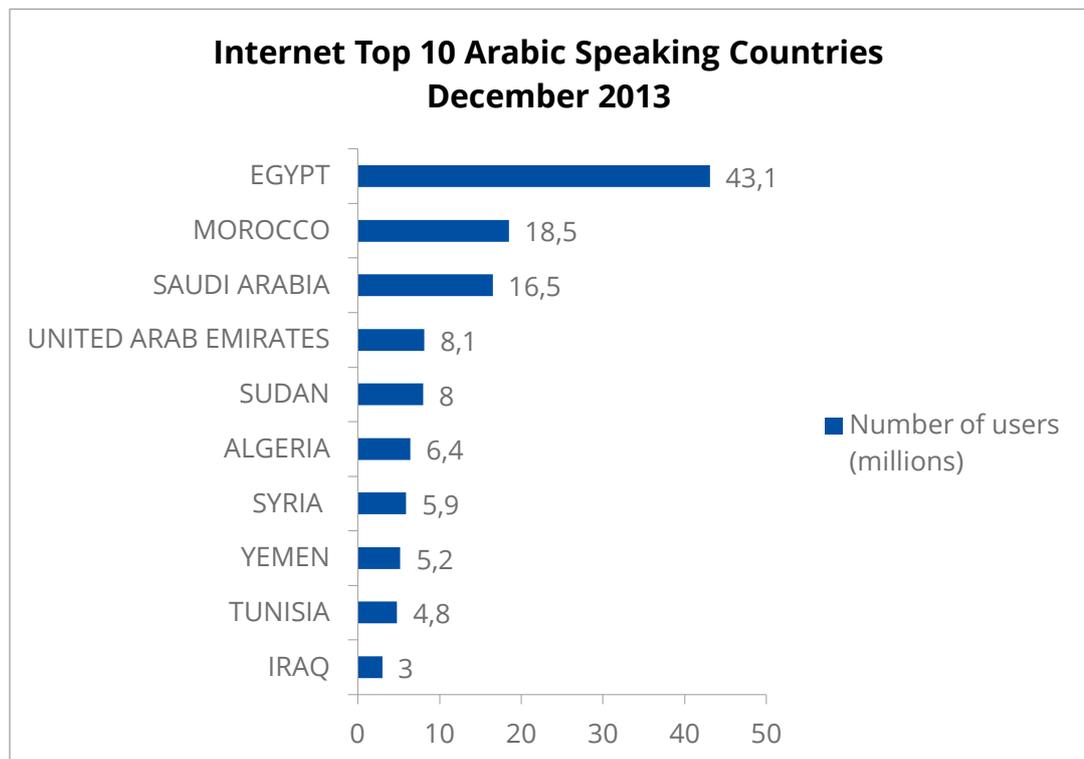
Internet penetration in the Arab countries

Arab countries are highly impacted by the Information Communication Technologies (ICT) which influence their economies and lifestyles. Research conducted by the MBR School of Government stated that in 2014 more than 135 million people used the Internet in the 22 Arab countries, representing roughly 4.8% of the world's internet users. This is associated to a mobile penetration rate of around 110 % on a regional level and more than 71 million active users of social networks.

Millions of Internet-connected devices are used in the Arab world. The spread of digital connectivity creates challenges and presents new opportunities for governments, businesses and individuals. The huge number of internet and mobile users in the Arab region motivated the creation of online government initiatives, for instance smart government, mobile government and smart cities.

The internet growth will highly impact the economic development in the Arab region. For 2020, it is forecasted that around 20% of the labor market in the Middle-East-North-Africa region will be related to the internet and technology industries.

How Arab countries rank in terms of internet usage

There were 135,611,000 estimated Arabic speaking internet users in December 2013.

Internet Top 10 Arabic Speaking Countries December 2013

Country	Number of users (millions)
EGYPT	43,1
MOROCCO	18,5
SAUDI ARABIA	16,5
UNITED ARAB EMIRATES	8,1
SUDAN	8
ALGERIA	6,4
SYRIA	5,9
YEMEN	5,2
TUNISIA	4,8
IRAQ	3

Language is a critical barrier for Arabic internet users

In 2013 Arabic was ranked the "eighth language in terms of growth and usage on the internet," according to a Google spokesperson. Yet there is a gap between the number of people who speak Arabic and the volume of content available online. As an example, Wikipedia publishes only 0.9 % of its articles in Arabic. An insignificant figure, if we add up the population of the Arab world, over 5%, to the millions of Arabic language speakers living outside the Arab World.

The region's political situation: post-Arab Spring
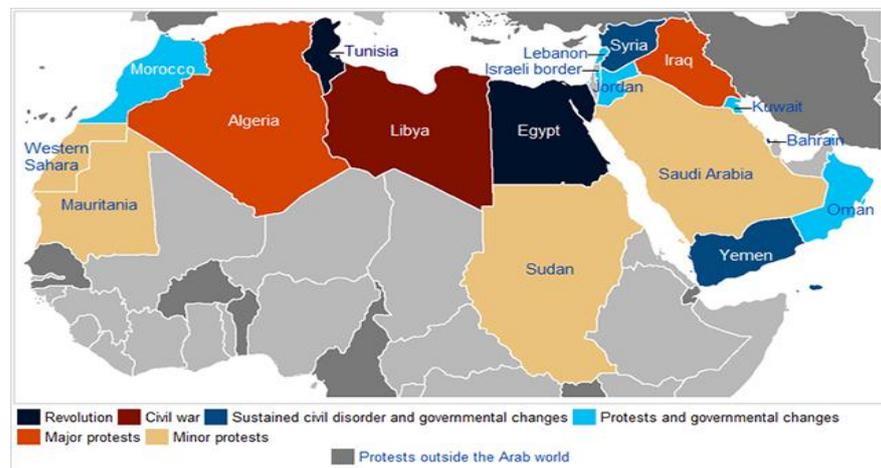
Source: Political Geography Now - www.polgeonow.com

The MENA region experienced in 2011 an important wave of popular revolutions called the Arab Spring to protest against unemployment, rising prices and corruption. The call for democracy started from Tunisia and spread through the Arab countries, namely Egypt, Libya, Yemen, Syria, Bahrain, Jordan and Saudi Arabia. In 2015 the civil war is still raging in Syria and Libyans are living in complete chaos, whereas Tunisia has succeeded in becoming democratic and Egypt has overthrown the Muslim brotherhood.

The revolutions involved strikes and demonstrations, as well as the use of social media by the youth. The latter played a major role in the organization, communication, and raise of awareness against the governments that attempted repression and Internet censorship.

As many countries remain unstable and risky, companies cannot ignore the sales potential of the more stable and resource-rich countries.

The Arabic language

Different forms of Arabic

There are three forms of Arabic: Classical or Qur'anic Arabic, Modern Standard Arabic and Spoken or Colloquial Arabic.

Qur'anic or classical Arabic

Classical or Qur'anic Arabic, Modern Standard Arabic and Spoken or Colloquial Arabic are the three distinct forms of Arabic

It belongs to the Semitic group of languages. It is one of the last surviving Semitic languages along with Hebrew, Amharic, and a dialect of Aramaic. Classical Arabic is the language of the Qur'an. It is primarily learned for reading and reciting Islamic religious texts. It is the language of Early Islamic Literature.

Modern Standard Arabic

It derives from classical Arabic. It is the language taught in schools and universities, used in news media, literature, science and technology and for administrative purposes across North Africa and the Middle East. There is therefore only one written form of Arabic and it is shared universally.

Modern Standard Arabic is one of the six official languages of the United Nations. Educated Arabs from different countries communicate in Modern Standard Arabic. The term "Modern Standard Arabic" is mainly used in the Western World. Many Arabs do not differentiate between classical and modern standard Arabic.

While Modern Standard Arabic is the only form of written Arabic, there are various forms of spoken Arabic.

Colloquial or dialectal Arabic

It refers to the different versions of Arabic spoken in the regions and countries of the Arab World. Some of these dialects are similar while others are mutually incomprehensible. People speaking different dialects can sometimes speak each in their own dialect and understand each other or will use Modern Standard Arabic to communicate. Colloquial Arabic can be considered as the mother tongue of most Arab speaking people, while Modern Standard Arabic is learned at school.

This particular situation, where speakers use a dialect in their everyday life and a second language which serves as a medial language and is used in reading and writing and in a more formal setting, is called "diglossia" (literally "two tongues").

Customers are often faced with the question: "Which Arabic should we translate into?" There is only one form of written Arabic. Translation is done into Modern Standard Arabic, which can be understood by all educated Arabs. There are nevertheless slight differences among regions regarding the type of calendar used, numbering formats, weekends, naming conventions, etc.

Characteristics of the Arabic writing system

The Arabic writing system is bi-directional, cursive, and context dependent.

Directionality

Arabic text runs from right to left (RTL) but numbers and Latin text are written from left to right (LTR). This leads to a mixed direction of text segments.

Furthermore, as Arabic is written from right to left, printed documents or screen applications are read from the top right-hand corner. This characteristic has implications on the way information should be presented and laid out on the page or screen. Graphics and icons are also affected by text direction. In an Arabic graphical user interface even the layout of items such as tables and charts are typically mirror-imaged on the horizontal plane.

Below is an example of how improperly laid out images can send an erroneous message:

For LTR readers, this laundry detergent advertisement is a sequence of 3 events: a dirty shirt, washing, a resulting clean shirt. While for RTL readers the message is: a clean shirt, washing, a resulting dirty shirt.

Character shaping

Arabic characters can take up to four different shapes depending on their position in a word.

The Arabic alphabet has 28 letters which all correspond to consonants. Arabic script is always cursive, whether handwritten or printed.

Because the Arabic script is cursive, twenty two of the letters can take four different shapes depending on their position in a word and the surrounding characters. Whether the letters are in initial, medial, final or isolated position, they will take on different shapes.

Example of the four different shapes of the Arabic character "ya":

| Initial	Medial	Final	Isolated
يـ	ـيـ	ـي	ي

The six remaining letters can only take on two possible shapes as they can be only connected to but not from. The shape of Arabic characters is thus context dependent.

Upper and lower case do not exist in Arabic, and abbreviations and acronyms are rarely used.

Ligatures

Ligatures also occur in the Arabic writing system. A ligature is a set of connecting characters that are replaced by one single new character. Ligatures are thus combinations of two or sometimes three characters into one shape.

Example of the "lam-alif" ligature:

$$ \text{لا} = \text{ا} + \text{ل} $$
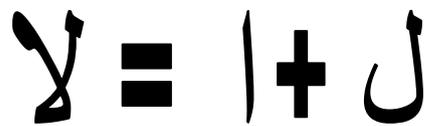
Diacritics

In Arabic, vowels are represented by signs above or below characters. These signs are called diacritics. There are 8 main diacritics in Arabic. There are single or double diacritics. They change the pronunciation and may change the meaning or tense. They can also help differentiate between words of similar spelling. The use of diacritical marks is optional in written standard Arabic, while they are generally present in the Qur'an or in religious texts. They are also used in teaching children to read. The positioning of diacritics can be affected by ligatures.

Numerals and dates

Numbering formats vary depending on the region. Arabic numerals may be represented by either Hindi digits or Arabic digits. North Africans use the Arabic digits, which are the same as the ten signs used in the European numbering systems, while in the Middle East, the Hindi digits are used. In both cases, numbers are written from left to right. Both the Western (Gregorian) and the Islamic lunar (Hijri) calendar systems are used in Arabic countries. Western and Islamic months' names can both be written in Latin or in Arabic scripts.

Arabic digits	0	1	2	3	4	5	6	7	8	9
Hindi digits	٠	١	٢	٣	٤	٥	٦	٧	٨	٩

Justification

Justification in documents with latin text is done by inserting spaces between words. In Arabic, justification is achieved by stretching the last letter of certain words in a line. This stretching is called a Kashida or Keshide (Persian for 'to extend') and looks like a horizontal connecting line.

Arabic text incorrectly justified with space between words

مثال   نص   عربي   منس   ق   بإضافة   فراغات
بين   الكلمات. هذه   الطريقة   غير   مناسبة
لتنسيق   النصوص   العربية.

Arabic text correctly justified with kashidas (extenders)

مثــال نـص عربــي منســــق بإضافـة "كشـيدة" بـين
الحــــروف. هـذه هـي الطريقــة الصـحيحــة لتنسـيق
النصوص العربية.

Punctuation

In Modern Standard Arabic, punctuation is commonly used, although it is less standardized than in other languages, as English or French. While the exclamation mark, period, and colon are similar in both Arabic and English, the question mark, comma, and semi-colon are displayed differently. The question mark in Arabic is reversed and faces rightwards. Commas can be used to separate long sentences in Arabic and are also reversed. Semi colons also face inwards.

Linguistic challenges and cultural considerations

Linguistic challenges

The last few decades have seen a flood of new scientific, technical and business terms. It is estimated that around 17,500 new terms are created every year in various fields. Many of these terms have no Arabic equivalents. This lack of standard terms for commonly used Western terms in various fields is a challenge for translators.

Terminology management is essential in localization. Only an experienced Arabic translator with a field expertise can accurately create custom Arabic terms which will be understood by your target market.

Translators are faced with the difficult task of "arabizing" numerous business, scientific and technical terms through coining, transliteration, adoption or translation. Hence the translator can choose to find terms from the Arabic scientific heritage (as Arabic provided European languages with terms like zero or algebra). The translator can also choose among other procedures such as transcription, literal translation, calque, cultural equivalent and translation label. Terminologists do not necessarily agree on the different procedures for localizing terms into Arabic.

There are many agencies involved in producing technical terminology throughout the Arab World, officially or unofficially. These agencies can be classified in several categories.

The first category groups the national Arab Language Academies of Cairo, Damascus and Jordan, and the Iraqi Scientific Academy.

Several research institutes are also involved in the production of terminology. Among these, we can name the Institute for Studies and Research for Arabization in Morocco, the Kuwait Research Institute, and the Arab Development Institute, in Libya, which produced in cooperation with Mc Graw Publishers in New York the Arabic version of their dictionary of science and technology.

The third category includes Pan Arab organizations and professional associations which produce terminology in their field of specialization (standardization, administration sciences, agriculture, oil, steel and iron, physics, chemistry, mathematics, etc).

Other categories of terminology producing agencies include universities, oil companies, mass communication agencies (through radio, TV and press), and publishers.

Outside the Arab World, the United Nations is probably the largest producer of Arabic terminology, Arabic being one of the 6 official languages of this organization. The organization has created 'ArabTerm', a multilingual online terminology database, which contains the translation of 42,000 terms, commonly used by the UN, in Arabic, English, French and Spanish. UNTERM is the United Nations terminology database which contains 85,000 terms related to a hundred subjects and is available in Arabic, English, French, Spanish, Russian, and Chinese. The online database UNBIS is a multidisciplinary thesaurus containing the

terminology used in subject analysis of documents and other materials relevant to UN programs and activities in the 6 official languages of the UN. Many UN agencies have some type of terminology databases containing Arabic.

With so many different sources of terminology, one of the main challenges for Arab countries is to coordinate and unify the terms. However two main language sources prevail in the fields of science and technology: French and English, which simplifies unification.

A few Arab countries mainly communicate with French speaking agencies, while the rest of the Arab world is more English-oriented. French is the second language used in Mauritania, Morocco, Algeria, and Tunisia, while in most other Arab countries, English serves as the main foreign or second language. Both languages have an important status as foreign languages in Lebanon and Syria.

The source language has an influence on the terminology used to translate into Arabic. An example is the use of both Nitrogen and Azote (the French term for Nitrogen) as loans in Arabic.

Terminology management is essential in the localization process into Arabic. One of the first steps for any arabization of scientific and technical data should involve solving the issue of terminology. Only an experienced Arabic translator with an expert knowledge of the field can accurately create custom Arabic terms which will be understood by your target market. Furthermore, when necessary, a glossary, describing the source terms, can be created for the reader.

The table below shows some of the major linguistic differences between Arabic and English, which can constitute hurdles for translating technical and scientific text:

Major Linguistic Differences between English and Arabic

English	Arabic
Words are composite.	Words tend to be more paradigmatic.
Only few grammatical items are compound.	Many grammatical items are compound.
Rigid word order	Flexible word order
Very few inflections	Highly inflectional
Uses abbreviations, acronyms, formulae, and registers.	Rarely uses abbreviations, acronyms, formulae, and clichés.
There is clear-cut tense-aspect distinction.	There is no clear-cut tense aspect distinction.
There is no dative or dual.	Contains dual.
Scientific and technical terminology covers all relevant fields.	Shortage of native scientific and technical terminology that may cover all fields.

English	Arabic
Archaic expressions are almost obsolete.	Archaic expressions are still in use.
Uses many compound lexical structures.	Uses fewer compound lexical structures.
Metaphor and other forms of figurative language are reserved for poetic use of language and certain related fields.	Metaphor and other forms of figurative language are very much frequent even in Modern Standard Arabic.
Adverbs are mostly formed by the affixation of (ly) to adjectives.	Adverbs are formed by prepositional premodification of nouns and adjectives; English prepositions such as before, after, above, over, below, under, behind, and between are adverbs in Arabic.
Capitalization is sometimes used for semantic implication e.g. Mosaic, Nativity, etc.	Does not use any form of capitalization.
Does not use vocalization.	Vocalization has a semantic function.
Punctuation has a bearing on the interpretation of texts.	Punctuation has less bearing on the interpretation of texts.
A part from such suffixes as (-ling and -ette) there is no paradigmatic diminutive in English.	Paradigmatic diminutive exists.
It has no diglossia.	Diglossia exists.
There are about twenty configurations of vowel sounds.	Only 3 vowels, which can be either short or long. No diphthongs.
There are no pharyngeal or glottal sounds except in the aspirated (H) and the colloquial glottal stop.	Pharyngeal and glottal sounds are among the standard phonemes in Arabic.

Cultural considerations

The wide majority of Arabs are Muslims. Cultural and religious sensitivity must be taken into account (especially in graphics and images). Translators may also have restrictions concerning the content of the material they're willing to translate.

Most Arab countries do not work on Fridays and Saturdays. Their work week begins therefore on Sundays.

Desktop Publishing in Arabic

The choice of application for your source document is important. Not all applications support Arabic and its features. The main issue is bi-directionality. You should therefore select a format for your source that can be handled in Arabic during DTP.

Adobe Flash

Adobe Flash is a multimedia platform which is used to create animation and motion. It is commonly used to integrate animation, interactivity and videos in web pages.

This piece of software is not designed to handle bi-directional script as well as other Arabic features as ligatures. However, there are work-around procedures as the bi-directional algorithm (BiDi algorithm). This algorithm rearranges the text in the correct right-to-left text order.

Adobe FrameMaker

Adobe Framemaker is unfortunately still not designed to handle mixed direction segments. It doesn't support the character sets of Arabic (Adobe). Framemaker is therefore not the most appropriate tool to publish Arabic documents. There are however work-around procedures that will allow DTP of Arabic Framemaker documents.

Adobe InDesign

Adobe InDesign Middle Eastern Version is specifically designed to handle Arabic or Hebrew. Its advanced language features allow spell checking, bi-directional text flow, typographic controls (kashidas, ligature, diacritics…), and advanced importing and exporting options. This software also manages cursivity to use the right character shape.

Creating HTML in Arabic

The World Wide Web Consortium (W3C) has created the HTML and CSS standards with a global audience in mind. These standards include items specific to correctly displaying Middle Eastern languages. Many browsers used for viewing HTML content now have support for Middle East content, either natively or through the use of plug-in extensions created by third parties.

QuarkXpress : ArabicXT

Versions 7 or higher of QuarkXpress can handle Arabic. The extension Arabic XT plug-in is required to manage Arabic.

Software Localization Issues

The most important issues in localizing software in Arabic can be solved during the design of the software itself. Software should ideally be designed with features that will allow it to be adapted into as many languages as possible without major engineering changes. Some engineering changes can be time-consuming and costly.

The main issues encountered in localizing software into Arabic have already been addressed earlier in this paper. These are:

Character encoding

The software should be able to display Arabic characters as well as receive Arabic input from users. It is highly recommended to use Unicode.

Right to Left User Interface

Not only should text run from right to left, but the entire user interface also. This includes mirrored menus, messages, and dialogs. These characteristics are particularly difficult to localize if they're not already included in the original design. Icons are often moved to the right margin. Graphics and tables are reversed. The vertical scroll bars are placed on the left and the horizontal scroll bar are right aligned.

Text expansion

Translation into Arabic generates approximately a 30% text expansion. The software designer should leave enough space to allow for text expansion. A resizing of most dialog boxes is necessary.

Regional Standards

Software applications should support Arabic regional standards as date/time/number/currency/address format and calendar information, as well as sorting and indexing rules.

Search and Replace

There are special search options that are specific to BiDi languages (for example, Hamza, a sign in Arabic orthography used to represent the sound of a glottal stop, transliterated in English as an apostrophe.
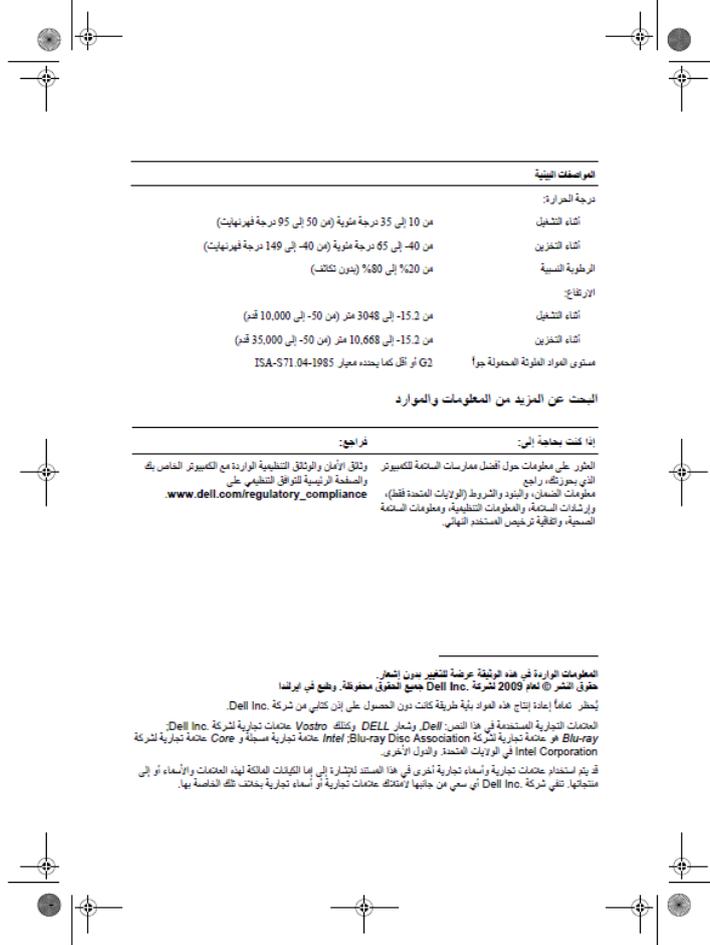
Customer examples

Dell

Dell is a world leader in the manufacturing of personal computers, servers and other computer-related products for the consumer, education, enterprise, and government sectors. Dell employs more than 78,900 employees worldwide. In 2008, Dell generated $61 billion in revenue.

WhP has been localizing material for Dell since 2001. This material mainly consists of product related documentation as user guides, owner's manuals, information updates, tech booklets, getting started guides, placemats and system information labels about Dell hardware.

WhP localizes Dell's documentation in up to 28 languages including bi-directional languages like Arabic and Hebrew. Source files are usually in Framemaker or QuarkXpress. We have also received InDesign projects. Deliverables include DTPed Framemaker/Quark/Indesign files, Medium or High resolution PDFs and HTML generated with webworks from Framemaker files.

Here are below some examples of documentation localized in Arabic for Dell

المواصفات البيئية

درجة الحرارة:

أثناء التشغيل	من 10 إلى 35 درجة مئوية (من 50 إلى 95 درجة فهرنهايت)
أثناء التخزين	من 40- إلى 65 درجة مئوية (من 40- إلى 149 درجة فهرنهايت)
الرطوبة النسبية	من 20% إلى 80% (بدون تكاثف)

الارتفاع:

أثناء التشغيل	من 15.2- إلى 3048 متر (من 50- إلى 10,000 قدم)
أثناء التخزين	من 15.2- إلى 10,668 متر (من 50- إلى 35,000 قدم)
مستوى المواد الملوثة المحمولة جواً	G2 أو أقل كما يحدده معيار ISA-S71.04-1985

البحث عن المزيد من المعلومات والموارد

| إذا كنت بحاجة إلى: | فراجع: |
| العثور على معلومات حول أفضل ممارسات السلامة للكمبيوتر الذي بحوزتك، راجع معلومات الضمان، والبنود والشروط (الولايات المتحدة فقط)، وإرشادات السلامة، والمعلومات التنظيمية، ومعلومات السلامة الصحية، واتفاقية ترخيص المستخدم النهائي. | وثائق الأمان والوثائق التنظيمية الواردة مع الكمبيوتر الخاص بك والصفحة الرئيسية للتوافق التنظيمي على www.dell.com/regulatory_compliance |

Document in Arabic with crop marks

Amadeus

Amadeus is the leading provider of IT solutions for the tourism and travel industry.

WhP has been the localization service provider for Amadeus since 1994. We localize all their software applications and related content (documentation, online help, web applications, marketing, training material and e-learning).

Amadeus develops many applications for different segments of the travel industry (airlines, car rental companies, cruises, hotels, etc.) in up to 30 languages. Most of these applications are available in a SaaS mode (Software as a Service) which requires simultaneous shipping of all products in all languages.

In production mode, all user interface strings are stored into a database and are retrieved by the application, depending on the user settings. Together these applications constitute around 30 software components, which are updated on a regular basis by different development teams spread around the world.

In the development environment, the UI strings of the components are stored in a multilingual database. Components of the UI that need to be localized are sent to WhP for localization in standard Xliff format. For the rest of the material localized for Amadeus, a wide variety of file formats are also processed, including InDesign, FrameMaker and Captivate.

SEP XLIFF Viewer

TP_SiteLanguageError Save All

10000:	1000 chars
The return date / time is earlier than the departure date / time, please amend	en-GB: 78
تاريخ/وقت العودة أبكر من تاريخ/وقت السفر، الرجاء عدّل	ar-QA: 53

10001:	1000 chars
Same location is entered as departure and arrival location	en-GB: 58
بعض الأماكن أدخلت على أنها أماكن مغادرة وأماكن وصول	ar-QA: 51

10015:	1000 chars
Invalid airline code.	en-GB: 21
كود رحلة طيران غير صالح.	ar-QA: 24

10020:	1000 chars
The departure location is empty	en-GB: 31
مكان المغادرة فارغ	ar-QA: 18

10021:	1000 chars
The departure location is not a valid IATA code, please amend	en-GB: 61
الرجاء عدّل مكان المغادرة غير صالح ليكون كود من نوع IATA،	ar-QA: 57

10022:	1000 chars
We found multiple departure locations for your search, please choose one	en-GB: 72
تم إيجاد عدة أماكن مغادرة كنتيجة لبحثك، الرجاء إختيار واحد	ar-QA: 58

10025:	1000 chars
The arrival location is empty	en-GB: 29
مكان الوصول فارغ	ar-QA: 16

10026:	1000 chars
The arrival location is not a valid IATA code, please amend	en-GB: 59
الرجاء عدّل مكان الوصول غير صالح ليكون كود من نوع IATA،	ar-QA: 55

Bilingual User Interface Strings (English - Arabic)

إعداد الحساب الخاص بك في نظام الإدارة

لمراقبة المبلغ المالي الذي تلقيته من التبرعات، ينصح بإعداد حساب من خلال الموقع "نموذج إنشاء الحساب PARTNER".

قبل تعبئة النموذج، أختر أمكانيات الحساب المفضلة لديك:

- الأمكانية 1: تريد حساب للشركة كاملة. ادخل المعلومات الآتية:
  - اسم الشركة
  - البلد المتواجد فيها المكتب الرئيسي
  - أسم العائلة، الأسم الشخصي والبريد الألكتروني لمسؤول الحساب الدولي
  - قائمة بأسماء المستخدمين للمكتب لكل GDS. يمكنك أستخدام جميع رموز الكتابة.

- الأمكانية 2: تريد حساب لكل دولة. ادخل المعلومات الآتية:
  - اسم الشركة
  - لكل بلد
  - بلد
  - أسم العائلة، الأسم الشخصي والبريد الألكتروني لمسؤول الحساب للدولة
  - قائمة بأسماء المستخدمين للمكتب لكل GDS. يمكنك أستخدام جميع رموز الكتابة.

- الأمكانية 3: تريد حساب لكل اسم مستخدم مكتبي. أدخل المعلومات الآتية:
  - أسم الشركة
  - أسم مستخدم مكتبي
  - بلد أسم المستخدم المكتبي
  - أسم العائلة، الأسم الشخصي والبريد الألكتروني لأسم المستخدم البريدي التابع لمسؤول الحساب
  - أسماء مستخدمين مكتبية. يمكنك أستخدام جميع رموز الكتابة.

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آمان البيانات وخصوصية الزبون

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Conclusion

As the Western world realizes the size and value of the Arabic Market, the demand for localizing in Arabic is increasing. However there are many challenges in localizing in Arabic.

The characteristics of the Arabic language can raise issues in translation and desktop publishing.

Arabic lacks equivalents for many technology and business terms. Terminology management is therefore a major aspect of localization in Arabic. It is necessary to choose the right localization partner who can provide you with experienced translators and manage your terminology.

WHP International SAS

Headquarters

Espace Beethoven, 1208, Route des Lucioles - BP 102

06902 Sophia Antipolis Cedex, France

Tel: + 33 (0)4 93 00 40 30

Fax: + 33 (0)4 93 00 40 34

contact.whp@whp.net

WhP Slovakia

WHP CEE

Špitálska 61

811 08 Bratislava

Slovakia

Tel: +421 (0)2 54 64 19 84

Fax: +421 (0)2 54 64 19 85

WhP China

710 Wujiao Fengda Business Plaza,

28 Zhengyi Road, Yangpu District

Shanghai 200433

China

Tel: +86 (0)21 5512 6887

Fax: +86 (0)21 5512 7312