Unicode, CLDR, and KYC, KYB, and Money Laundering

Mike McKenna

G11n Architect, PayPal

40th Internationalization and Unicode Conference

PayPal

Abstract:

In today's world, when money is passed from one party to another, someone else watches that transaction and must decide if it is legal or suspicious. Every legal money institution is required to "Know Your Customer" - known in the industry as "KYC", and "Know Your Business" (KYB). This is to reduce risk, and for regulatory requirements, compliance with local and international governments.

In this session, you will get a quick overview of KYC, KYB, Risk and Compliance, then we will delve into the internationalization aspects and how Unicode and CLDR help.

Topics to be shared:
- *what is KYC, KYB?*
- *Risk and Compliance - the what and why*
- *Anti-Money Laundering*
- *What are Designated Individuals*
- *User information and onboarding to applications*
- *What is unique for KYC and KYB from country to country*
- *What's in a name? Legal names and login IDs around the world*
- *How to use CLDR to reduce Risk in user information*
- *How Unicode helps to reduce Risk in user sign-up*
- *How International Components for Unicode (ICU) helps with AML and finding Designated Individuals*

Due to the proprietary nature, no confidential data or processes from PayPal will be shared, but instead the paper and discussion are based off publicly available government and institutional guidelines, i18n best practices, and industry experience.

40th Internationalization and Unicode Conference

Introduction

Money is used for good …

… and money is used for bad.

Organizations that handle money are required to help stop the bad.

40th Internationalization and Unicode Conference

PayPal

Money Laundering

noun

the **concealment** of the origins of **illegally** obtained money, typically by means of **transfers** involving **foreign** banks or legitimate businesses.
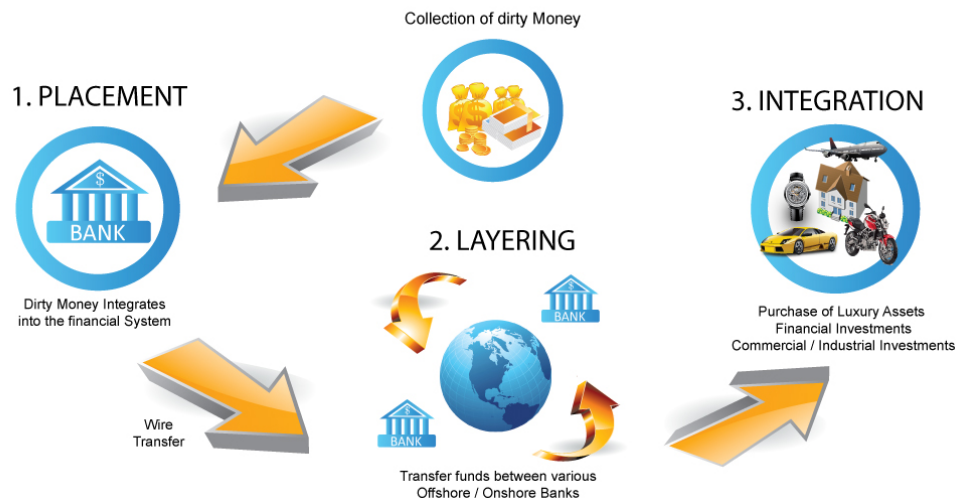
PayPal   40th Internationalization and Unicode Conference   4

http://www.onlinemba.com/blog/money-laundering-hypothetical-how-to-pt1/

Money Laundering steps

A TYPICAL MONEY LAUNDERING SCHEME

Money Laundering cases

- Send to untracked individual
- Send many small amounts
- Send to many individuals
- Send to shell company
- Send to Casino, NGO, off-shore

PayPal © 2016 M.McKenna, PayPal Inc.   40th Internationalization and Unicode Conference   7

What are AML and CFT?

AML – Anti Money Laundering

CFT – Counter Finance of Terrorism

PayPal © 2016 M.McKenna, PayPal Inc.   40th Internationalization and Unicode Conference   8

What are KYC, KYB?

KYC = *Know Your Customer (individual)*

KYB = *Know Your Business (organization)*

*P**PayPal*** © 2016 M.McKenna, PayPal Inc.   40th Internationalization and Unicode Conference

What are Designated Individuals?

SDN - **Specially Designated Nationals and blocked persons**

Organizations and individuals

PEP — *Politically Exposed Persons*

Aircraft, Vessels

*P**PayPal*** © 2016 M.McKenna, PayPal Inc.   40th Internationalization and Unicode Conference   10

40th Internationalization and Unicode Conference

Lists, lists, lists …

OFAC – *US Office of Foreign Asset Control*

CSSF – Commission de Surveillance du Secteur Financier

EEAS – European Union External Action

HMT – UK HM Treasury and Office of Financial Sanctions Implementation

UNSC - United Nations Security Council Sanctions

PEP – Politically exposed persons anywhere

Risk and Compliance – your job

- ***Reduce risk***
- ***Compliance to regulations***

Regulatory - *must check and track*

PayPal © 2016 M.McKenna, PayPal Inc.　　　　40th Internationalization and Unicode Conference　　　13

Check when onboarding …
KYC

- Real person?
- Real address?

KYB

- Real business?

AML

- On SDN lists?

PayPal © 2016 M.McKenna, PayPal Inc.　　　　40th Internationalization and Unicode Conference　　　14

Thresholds

If above xx must validate

- Due diligence
- MCC

Source and target

- Size of transactions
- Total from
- Total to

❭ Example: Malta

❭ A8. One off transactions (single or linked) under EUR15,000 do not require customer due diligence.

❭ Source: PWC

PayPal © 2016 M.McKenna, PayPal Inc.   40th Internationalization and Unicode Conference   15

Individuals: Example: Malta

Individuals: The following information should be obtained:

a) official full name;
b) place and date of birth;
c) permanent residential address;
d) identity reference number, where available; and
e) nationality.

These should be verified against photographic evidence of identity listed through one of the following:

a) a valid, unexpired passport;
b) a valid, unexpired national identity card; or
c) a valid, unexpired driving licence.

❭ Source: PWC

PayPal © 2016 M.McKenna, PayPal Inc.   40th Internationalization and Unicode Conference   16

Business: Example: Malta

Legal entity: The subject person is required to first identify the private company by gathering the following information:

a) the company's official full name;

b) the company's registration number;

c) the company's date of incorporation or registration; and

d) the company's registered address or principal place of business.

These should be verified by viewing one or more of the following documents:

a) the certificate of incorporation;

b) a company registry search, including confirmation that the private company has not been, and is not in the process of being dissolved, struck off, wound up or terminated; or

c) the most recent version of the Memorandum and Articles of Association or other statutory document.

Source: PWC

17

Official full name

Must match identity documents for country of registration

• Beneficial owners from other countries

What script?

What characters allowed?

Content determined by Gov't

- UK: Deed Poll
  - At least one forename and one surname
  - Pronounceable, Latin characters
  - No numbers, limited punctuation (- ' OK)

- Japanese: Ministry of Justice
  - Only "name kanji" (Jinmeiyō kanji) and "common kanji" (Jōyō kanji)
  - Need all kanji for pre-WWII names

Content determined by Gov't

- RU: OMS Insurance IT Specs

marks Group	Surname	Name	middle name	
The letters of the Russian alphabet	+	+	+	
the Latin alphabet	±	±	±	
figures	+	+	+	
Space and its equivalents	+	+	+	
Punctuation marks:				

Names

- How many names?
  - First Names, Last Names?

    André van der Hoek
  - First Name, Middle Name, Mother's Name, Father's Name (*Latin*)
  - Family Name, First Name, Patronymic?
  - Family Name, Given Name
  - One Name? (*Indonesia, Tamil*)

    Sukarno

Name checks?

- Punctuation?

  O'Reilly, Williams-Sonoma,
- Single letters?

  Catch: "X X"

  Valid: Malcolm X, Karen O, Harry S. Truman

  CJK Names: 王 立誠
- Fname = Lname?

  Catch: "asdf asdf"

  Valid: Mohamed Mohamed

Address checks?

- Match script

- Validate

- Google i18napis

- Per-country input validation

- Postcode-region matching

- Address normalization services

PayPal © 2016 M.McKenna, PayPal Inc.   40th Internationalization and Unicode Conference   23

Unicode to red

Confusables?

- Is "Ηіllαγ Ɍ Clіптоп'

- Use Unicode script properties to detect

H	13BB	CHEROKEE LETTER MI
і	0456	CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN
l	006C	LATIN SMALL LETTER L
l	006C	LATIN SMALL LETTER L
a	0430	CYRILLIC SMALL LETTER A
г	0433	CYRILLIC SMALL LETTER GHE
γ	03B3	GREEK SMALL LETTER GAMMA
SP	0020	SPACE
Ɍ	13D2	CHEROKEE LETTER SV
SP	0020	SPACE
C	0421	CYRILLIC CAPITAL LETTER ES
l	006C	LATIN SMALL LETTER L

PayPal © 2016 M.McKenna, PayPal Inc.

CLDR to reduce Risk:

Match legally allowed text

- "exemplar characters"
- *characters.json*
- *Ex: de-DE:*
  "exemplarCharacters": "[a ä b c d e f g h i j k l m n o ö p q r s ß t u ü v w x y z]"
  "auxiliary": "[á à ă â å ã ā æ ç é è ĕ ê ë ē ğ í ì ĭ î ï İ ī ı ñ ó ò ŏ ô ø ō œ ş ú ù ŭ û ū ÿ]"

> https://github.com/unicode-cldr/cldr-misc-full/blob/master/main/<lang>/characters.json

CLDR to reduce Risk:

Languages by Country

- "languagePopulation"
- *territoryInfo.json*
- *Ex: LT:*

```
"languagePopulation": {
  "en": {
      "_populationPercent": "38"
  "lt":  {
      "_populationPercent": "86"
      "_officialStatus": "official"
  "ru":  {
      "_populationPercent": "8"
  "sgs": {
      "_populationPercent": "0"
```

> https://github.com/unicode-cldr/cldr-core/blob/master/supplemental/territoryInfo.json

ICU helps with AML and SDN

Transliteration?
Database matching?

- Most databases in Latin
- أبو بكر البغدادي → ặbw bkr ạlbgẖdạdy
- No matches!

AML/KYC Services

- Transliteration
- Name matches
- Address verification

References

- Money Laundering video: From http://www.onlinemba.com/blog/money-laundering-hypothetical-how-to-pt1/
- Summary of sanctions: http://www.bscn.nl/sanctions-consulting/sanctions-list-countries
- OFAC: Office of Foreign Asset Control
- OFAC SDN: https://www.treasury.gov/resource-center/sanctions/SDN-List/Pages/default.aspx
- FATF: Financial Action Task Force (FATF), http://www.fatf-gafi.org/media/fatf/documents/recommendations/pdfs/FATF_Recommendations.pdf
- CSSF: https://supervisedentities.apps.cssf.lu/index.html?language=en#Home
- EU: https://data.europa.eu/euodp/en/data/dataset/consolidated-list-of-persons-groups-and-entities-subject-to-eu-financial-sanctions
- UK HMT: https://www.gov.uk/government/publications/financial-sanctions-consolidated-list-of-targets
- SECO: https://www.seco.admin.ch/seco/en/home/Aussenwirtschaftspolitik_Wirtschaftliche_Zusammenarbeit/Wirtschaftsbeziehungen/exportkontrollen-und-sanktionen/sanktionen-embargos.html
- UN Sanctions: https://www.un.org/sc/suborg/en/sanctions/un-sc-consolidated-list
- PwC AML Guide: https://www.pwc.com/gx/en/financial-services/publications/assets/pwc-anti-money-laundering-2016.pdf
- Identity documents: https://en.wikipedia.org/wiki/Identity_document

References (cont)

- UK Deed Poll: http://www.deedpoll.org.uk/AreThereAnyRestrictionsOnNames.html
- Japanese Name: https://en.wikipedia.org/wiki/Japanese_name https://en.wikipedia.org/wiki/Jinmeiy%C5%8D_kanji https://web.archive.org/web/20150320041010/http://www.bunka.go.jp/kokugo_nihongo/pdf/jouyoukanjihyou_h22.pdf
- Google Address validation: https://github.com/googlei18n/libaddressinput/wiki/AddressValidationMetadata http://i18napis.appspot.com/address
- PEP Spoof and check: Hillary R Clinton https://r12a.github.io/uniview/
- CLDR Exemplar characters: http://cldr.unicode.org/translation/characters#TOC-Exemplar-Characters Examples: https://github.com/unicode-cldr/cldr-misc-full/blob/master/main/de/characters.json https://github.com/unicode-cldr/cldr-misc-full/blob/master/main/ru/characters.json
- CLDR Territory Info: http://www.unicode.org/cldr/charts/latest/supplemental/territory_language_information.html https://github.com/unicode-cldr/cldr-core/blob/master/supplemental/territoryInfo.json
- ICU Transliteration demo: http://demo.icu-project.org/icu-bin/translit/

Thank you!

- You can reduce risk by

- Real name?

- Real address?

- Match name to lists?

Mike McKenna   *mgm@globalization.org*