# The Dun & Bradstreet Asia Match Environment.
# AME FAQ

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## 1. Can D&B do matching in Asian languages?

Yes! D&B's best-in-class Entity Matching services are now available in the following Asian languages:.

| Matching on | In this language |
|---|---|
| Japan | Japanese |
| China (PRC) | Simplified Chinese |
| Taiwan (ROC) | Traditional Chinese |
| South Korea (ROK) | Hangul |

The environment which enables this matching is called the Asia Match Environment, or "A.M.E." for short.

## 2. What is AME?

D&B's Asia Match Environment is a platform designed to enable D&B's best-in-class Entity Matching in Asian languages. AME currently supports native-language matching on Japan, Taiwan, mainland China (PRC), and South Korea.

## 3. What is "AME Central"?

AME Central is the unified environment at D&B where the AME systems reside.

## 4. What are "AME Central Batch" & "AME Online"?

AME Central Batch is the route into AME that enables batch (file-based) matching via FTP. Most matching using AME Central Batch is performed by D&B teams on behalf of customers, although it is possible for customers to use AME Central Batch as a "self-service" system in certain circumstances.

AME Online provides transactional (single-inquiry) Asian language matching in real-time. AME Online is available via a web services API - D&B contacts can provide more information on the API and creation of new ones to suit individual customer needs.

## 5.  How similar is AME matching to D&B's other matching services?

D&B matching is far more than applications and environments and AME is no exception. AME provides the same feedback and decisioning insights as D&B's other best-in-class matching worldwide.  This includes Confidence Code™, MatchGrade™, Match Data Profile™ and Match feedback reports.

Further, AME can provide Match feedback in English, Simplified Chinese, Traditional Chinese, Japanese or Korean – or any combination of these.  So a customer's head office can read the same report in English that their local Tokyo office reads in Japanese.

## 6.  How does AME translate between English and Asian languages?

AME does not translate to or from any language.  It matches _natively_ in Asian languages. Sometimes in Asia words will be written in Latin script (e.g. because a system cannot store data in Asian scripts), but once this happens there is an inevitable loss of detail meaning.

Further, Asia data can be _translated_ and/or _transliterated_ when converted to "English", and these 2 processes are actually very different and create different challenges in Entity Matching.

## 7.  What is the difference between translation and transliteration?

When data (such as a business name) is represented in Latin script, it may be transliterated and/or translated.

Transliteration is representation of one language in another - in the case of Japanese to English it is representation of the way the Japanese word sounds when written in  the Latin alphabet.

Translation is representation in a different language of the meaning of something written in the original language.

This is best illustrated by examples:

| 1. Original Name in Japanese | 三菱重工 |
|---|---|
| 2. Transliterated | MITSUBISHI JUKO |
| 3. Mix | Mitsubishi Heavy Industries |
| 4. Translation | Three Diamonds Heavy Industries |

Note that example 3 (which is how MHI is usually known) is actually a mix of translation and transliteration.  "Mitsubishi" has been transliterated, and "重工" has been translated.

## 8. Does AME-C handle both Mandarin and Cantonese?

Mandarin and Cantonese are the main spoken dialects of Chinese, but do not affect writing.   It's really more about where you are, as different Chinese-speaking countries write Chinese differently. The 2 writing systems are Traditional and Simplified.

Here's a table of how the writing works:

| Place | Writing | Speaking |
|---|---|---|
| Mainland China | Simplified | Mandarin |
| Hong Kong | Traditional | Cantonese |
| Taiwan | Traditional | Mandarin |
| Singapore | Simplified | Mandarin |

Note that the above table is a very simplistic view of Chinese and does not take into account variations in dialect or common writing styles.  For example, Taiwanese people speak slightly different dialect of Mandarin from the residents of Beijing, and their Traditional writing vocabulary differs quite a bit from Hong Kong's.

AME supports **Simplified Chinese on China** and **Traditional Chinese on Taiwan**.

## 9. What about Simplified and Traditional Chinese?

Simplified Chinese is the official writing system of mainland China.  There are approximately 3,000 Simplified characters in common use (a precise number depends on geopolitical and historical factors which will not be discussed here).

Hong Kong and Taiwan use Traditional Chinese.  There are approximately 4,000 Traditional characters in common use in Taiwan (i.e. to read the newspaper), although there are many cases of "vanity names" being given to businesses and individuals via the use of obscure and uncommon characters.

It is technically possible to transliterate Simplified Chinese into Traditional Chinese and most Traditional Chinese characters in daily use into Simplified Chinese.

AME does not do such transliteration at present.

## 10. Does AME recognize both Katakana and Kanji in Japanese?

Katakana is a phonetic syllabary (as is Hiragana).  It is possible to transliterate any Japanese (eg Kanji) text into Katakana which then gives you the pronunciation.  But the process of doing this in real-time (for an inquiry) is prohibitively complex because there

can be numerous pronunciations for any given Kanji character and these will change according to the context (i.e. what other characters surround that Kanji character).

| 本 | ホン | HON | Book |
| 日本 | ニホン | NIHON | Japan |
| 日本 | ニッポン | NIPPON | Japan (alternate pronunciation) |
| 松本 | マツモト | MATSUMOTO | surname "Matsumoto" |

AME does not automatically convert between Kanji and Katakana.

Also, in the Japan business world the script used to write a name is significant, so it is possible (and quite common) to have a company with a name in Katakana pronounced identically to another company whose name is written in Kanji. Or Romaji (Latin). Or Hiragana.

It is slightly analogous to having "APPLE", "apple" and "🍎" being 3 different, unrelated companies.

***What AME does:***

- AME-J has candidate retrieval algorithms optimised for names which contain Katakana or Hiragana.

- AME-J does phonetic analysis of names in its scoring.

## 11. Will AME return an error if there are English (Latin) characters in the inquiry?

No, AME matches using "native" language for the 4 countries it supports, and this does not mean it is limited to specific character sets. Latin characters are used extensively in Korea and Japan, and to a slightly lesser extent in Taiwan and China, but when used locally they are considered a normal part of the native language.

## 12. What if my inquiry is all English?

AME will attempt to match any input it is given, but it is not optimized for non-native representations of data. If the data in an inquiry has been transliterated (or worse, translated) AME will be unable to match with high quality or confidence.

D&B's other match environments (for AME countries this is GOLF/GMC) are tailored for this kind of inquiry, and so submission of these inquires to these systems will yield the best outcomes.

## 13. Does AME use MatchGrade and Confidence Codes?

Yes! There are **110,592** possible MatchGrade patterns available in AME. AME does not use the "PO Box" and "Density" MG patterns but all others are supported.

## 14. What Confidence Codes are supported?

| Country | Confidence Codes (green = supported) |
|---|---|
| Japan | 1 2 **3 4 5 6 7 8 9 10** |
| China | 1 2 **3** 4 **5** 6 **7 8** 9 **10** |
| Taiwan | 1 2 **3 4 5 6 7 8 9 10** |
| Korea | 1 2 **3 4 5 6 7 8 9 10** |

## 15. Why don't AME countries generate Confidence code 1 & 2?

CC101 are very low-quality matches. AME's business logic for Confidence Code assignment is based on analysis of local data, not a copy from other countries. As such, there is little value in differentiation between Confidence Codes 1, 2 and 3. Put simply, anything 3 or below is a poor-quality match, and little is gained by further dissecting quality at this level.

## 16. How do I use AME Online transactional matching?

AME offers an XML SOAP API called "**AME SOAP**"

To connect a calling system will send through a message containing:

a) Authentication information (username/password)

b) Inquiry data

c) Confidence code cut-off for auto-match

The response from AME will contain:

a) The DUNS of the best match (if any)

b) The Matchgrade, Confidence Code and Match Data Profile for the matched entity

c) "Identity Data" (basic name and address information) for the matched entity

### 17. I know about "DIT-X" – is AME connected to that?

AME SOAP is not related to DIT-X or Toolkit, but the concept is the same.

### 18. Where is AME Central located?

AME Central runs in D&B's data center located in Arkansas, USA.

### 19. Is there a schema for AME Online Matching?

Yes. The AME XML SOAP web service (aka "AME SOAP") has a WSDL (see below).

### 20. What is the URL of the AME SOAP WSDL?

http://dbdit.dnb.com:8080/AME-Reference-Type/services/Match?wsdl

### 21. How fast is AME?

AME matching is **non-deterministic**, which means that the route to the "best match" for a particular inquiry is not pre-ordained. There can therefore be some variability in the time taken for individual match transactions.

As a guide, most AME Online match transactions will take between 0.5 – 1 seconds, excluding "Internet latency" (the time data takes to travel in each direction between the user's computer and the D&B data centre).

AME Central Batch matching also requires some extra processing time for MatchGrade report generation and movement of the relevant files back and forth between AME and the other D&B systems in the matching workflow (e.g. ftp.dnb.com). As at March 2015 AME Batch can process approximately 90,000 matches per hour, per country.