The Basics on Data Matching

WHAT IS MATCHING?
Matching, also known as Identity Resolution, is when you connect your organization’s data to a trusted set of commercial reference data. This is done to help cleanse your records of faulty data (for example, a typo or wrong information) or to append additional information to a record.

WHAT ARE THE BENEFITS OF MATCHING?
By doing as much as possible to ensure that the right information is associated with the right business, an organization can strengthen confidence in its decision making. This can lead to more operational efficiencies, increased sales, reduced risk and other business use cases. Many organizations automate their matching process to maximize these benefits.

HOW MATCHING WORKS
You supply key information about your business data, for example, data about clients, prospects, suppliers, or records on other business partners. Then, Dun & Bradstreet uses proprietary scoring algorithms to identify businesses in the Dun & Bradstreet Data Cloud that most closely resemble the information provided until we locate the actual business.

Every business in the Data Cloud has been assigned a unique D-U-N-S® Number. Once we associate your record with the D-U-N-S Number we can append high-quality business-critical data to feed your decision making.

The Dun & Bradstreet Data Cloud offers the world’s most comprehensive business data and analytical insights to power today’s most crucial business needs. That’s why 90% of the Fortune 500, and companies of all sizes around the world, rely on Dun & Bradstreet to help grow and protect their businesses. The Data Cloud includes our own proprietary data as well as data sourced from tens of thousands of public sources.

For more than over 50 years, we have tracked businesses by assigning a unique identifier (known as the Dun & Bradstreet D-U-N-S® Number) to each entity in the Data Cloud. The D-U-N-S Number is a proprietary, unique 9-digit identifier for businesses that allows us to track a business and its related data and connections throughout the full lifecycle of that business. A D-U-N-S Number is only assigned once – a number is never reused.
WHAT MAKES A GOOD MATCH?

There are three factors determine the success of match results.

QUALITY AND COMPLETENESS OF YOUR DATA

It's important to provide as much complete, accurate data as possible, especially for these key input variables:

- Business name
- Street number
- Street name
- City
- State
- Mailing address
- Telephone

QUALITY AND COMPLETENESS OF REFERENCE DATA

Dun & Bradstreet reference data is updated millions of times each day. But unlike consumer data, in which a Social Security Number can easily differentiate two individuals with otherwise similar identity data, business entities present a greater challenge.

ROBUST TECHNOLOGY

It's important to use a robust, stable match engine that can accommodate spelling errors, formatting errors, and other flaws.

Here are some examples:

Will the engine be able to recognize this common typo as a street address?

15 Cherry Stret

Or will it know that (617) 555-5555 and 6175555555 are both the same phone number?

TAKE A LOOK!

Does this look familiar? On the surface the three records on the left appear different, but matching to the Data Cloud we can determine that these all refer to the same business. Then we can append additional information.

Now everyone across the company, regardless of workflow, has a shared, consistent view of this customer record.

DETERMINES UNIQUENESS OF ANY GIVEN ENTITY BEFORE ASSIGNING D-U-N-S NUMBER

IDENTITY RESOLUTION YIELDS SINGLE VIEW OF THE ENTITY

CONSOLIDATED PROFILE

D-U-N-S assigned
Names rationalized
Addresses categorized
GETTING TO KNOW YOUR MATCH RESULTS

When you undertake a match exercise, you have to determine whether the record returned is really the record you want. Dun & Bradstreet provides some information about the match to help you decide whether you want to accept it.

CONFIDENCE CODE™
How good do we feel about the match?

We assign a score, the confidence code, that lets you know how we feel about this match. If your use case is risk averse, you’re looking for a higher score. For sales and marketing where the use case may have less risk, a lower score is often acceptable.

MATCH GRADE STRING™
Why do we feel that way?

Want even more detail? We’ve got it! The confidence code is based on multiple pieces of data in the record. So we assign a match grade string which indicates how closely the Dun & Bradstreet reference data resembles the corresponding element in your inquiry data.

The match grade pattern is mapped to a confidence code. The higher the number (1-10) the more confidence we have in the match.

MATCH DATA PROFILE™
What data, including alternative data, did we use for the match?

Keeping data fresh and up-to-date can be hard. Let’s say that you have a former executive’s name in the ‘company name’ field. (Perhaps the company wasn’t named yet when your sales team created the record.) We may still be able to use this information to match the record to the correct business. The Match Data Profile (MDP) code lets you know how we used your information to arrive at the match.

MATCHED TO

Customer Inquiry Data          D&B’s Match Reference File
INPUT NAME | BUSINESS NAME | NAME MDP
ABC Enterprise, Inc.       ABC, Inc. | 00
ABC Companies, Inc.        ABC, Inc. | 01
Alpha Plastics             ABC, Inc. | 02
Charles Smith              ABC, Inc. | 03
Mary Worth                 ABC, Inc. | 04
ABCOINC                    ABC, Inc. | 10

Names are just the start; MDP Codes are available for other input fields, too!
WHAT IF YOU DON’T GET THE RESULTS YOU WANT?

UNDERSTAND THE CAUSE

Match rate refers to the percentage of input records that meet your acceptance criteria (e.g., based on confidence code). If that match rate is lower than desired, we look to understand why and what we can do to improve it. Although many business leaders expect a 100% match rate, that’s not always going to be the case. Some projects can only hope for a match rate around 60% based on the quality of the input data, while others can achieve 95% or more.

Here are some of the issues that factor into the match rate score.

- Record completeness – The more information you provide on a record, the better the chances the match engine will return the right match. Missing fields can lead to lower confidence, so even if the right record is to be had, the confidence may not meet our quality threshold, and the match is rejected.
- Data quality – There’s an old saying, “What you put into the pot comes out in the ladle.” The quality of the data you put in is key to good match performance. Look for common errors and error patterns – for example, words such as “NULL” or “DO NOT USE”, “c/o” instead of the address, phone numbers or postal codes that don’t have the requisite number of characters, numeric when alpha characters are expected, or vice-versa, etc.)
- Field mapping – Ensure the input file has the correct data in each field. Don’t accidentally put phone number in a zip code field. Yes, neatness counts!
- Other causes – Unverified businesses as well as entities not eligible for D-U-N-S Numbers will not result in a match (e.g. ATM locations are not assigned a D-U-N-S Number whereas a bank location is assigned one)

IMPROVING MATCH RESULTS

Before considering ways to improve match performance, it helps to recast the match rate in terms of business impact. Instead of thinking about how many records matched or didn’t, we think about the magnitude of the relationship, for example, dollars spent, credit limit, etc. We often find that more important account records tend to get more attention which results in higher match rates.

If we determine that match rates must still be improved, we can try using some other approaches:

- If available, we test alternative fields that may have better fill rates.
- Consider multi-pass match. This is where we set up logic whereby if a record fails to match on the first pass, we attempt to match with a different set of input data (e.g., alternative location, officer names, URL, TaxID, etc.)
- Broaden the acceptance criteria (i.e. lower the match threshold) by leveraging our advanced match meta data.

NEXT STEPS

Dun & Bradstreet’s Data Advisory Services team has extensive experience optimizing match rates and are happy to assist with this process. Please don’t hesitate to engage us. Your client director can make the referral to our team of experts.

ABOUT DUN & BRADSTREET

Dun & Bradstreet, a leading global provider of business decisioning data and analytics, enables companies around the world to improve their business performance. Dun & Bradstreet’s Data Cloud fuels solutions and delivers insights that empower customers to accelerate revenue, lower cost, mitigate risk, and transform their businesses. Since 1841, companies of every size have relied on Dun & Bradstreet to help them manage risk and reveal opportunity. Twitter: @DunBradstreet

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