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MAGAZINE

ESSENTIALS FOR DATA-DRIVEN SUCCESS

Summer 2018

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> "For us, the DARE initiative is a four-pronged approach to meet customers' demands worldwide – D for diversification, A for acquisition, R for responsibility, and E for expansion. It's all about providing our customers with the right tools and the right support, for a unified experience that will help them grow their business and position them for continued success." *- Ray Melissa, Melissa, P4*

MELISSA SPOTLIGHTS

Q&A with Melissa's CEO **Raymond Melissa**: ‘2018 is the year to DARE’

By Abby Telleria

The 'Melissa' behind the company name, Raymond Melissa has served as President and CEO of Melissa since 1985. A computer industry veteran, he co-founded several tech-oriented firms during the 1970s, including Eikon, Inc. In 1974, Melissa helped launch Printronix Inc., a computer printer manufacturer, and in 1978, co-established Trilog, Inc., one of the first companies to develop a color printer.

Transform or be left behind. That’s how Raymond Melissa views today’s competitive world where data powers digital transformation. Based in Rancho Santa Margarita, Calif., the data quality and data enrichment solutions company has moved into multiple new markets across different sectors and regions of the world. There’s an enterprise data quality arm, a direct marketing division, and a new informatics offering. Melissa said providers need to empower enterprises with the ability to access, integrate and trust information assets to realize maximum business value. He recently spoke with Melissa Magazine Managing Editor Abby Telleria. The following is an edited transcript.

MELISSA MAGAZINE: Your company has put a lot of emphasis on its DARE initiative in 2018. Can you explain what that means?

MELISSA:

For us, the **DARE** initiative is a four-pronged approach to meet customers’ demands worldwide – **D** for ***diversification***, **A** for ***acquisition***, **R** for ***responsibility***, and **E** for ***expansion***. It’s all about providing our customers with the right tools and the right support, for a unified experience that will help them grow their business and position them for continued success.

MM: In terms of diversification, what steps has the company taken in 2018?

MELISSA:

If you visit our homepage, you’ll notice we’ve tweaked the layout to better serve our main customer personas and improve the visitor experience. We have developed separate sections for enterprise customers, developers and direct mailing and marketing professionals. And, we’ve created separate, standalone websites: MelissaDirect.com and MelissaDeveloper.com. Melissa Direct is a one-stop for marketers, mailers and business owners to easily find the tools and services they need to generate leads, improve direct and email marketing campaigns and derive better customer intelligence. And, Melissa Developer is essentially a playground where developers have immediate access to our full spectrum of data cleansing and enrichment APIs – sample code, technical documentation and scalable pricing for immediate purchase and testing.

MM: Let’s talk about your acquisition efforts this year.

MELISSA:

Acquiring IO Informatics just made so much sense. We see a perfect marriage of data quality and semantic technology – clean clinical data and the harmonization of disparate datasets – for true insights that save time, money, and even lives. This division is now called Melissa Informatics. We will use our data quality expertise to bolster advanced research to screen

multiple data sources for patterns. Once these patterns and discoveries are recognized, we inch even closer to determining patients at risk. By integrating databases across disciplines from disparate systems, their platform accelerates clinical discovery to share insights across medical fields – a truly remarkable innovation that enhances preventative care so clinicians can save lives. It's a natural fit for us and our comprehensive approach to solving complex data challenges for an enterprise client base. We're very excited about this new venture!

MM: Responsibility is a hot topic these days – how did you address this issue?

MELISSA:

In light of recent events, it's even more critical now to protect customer data and to ensure data privacy. That's why we feel it's our responsibility as a data solutions provider to ensure your business data is safe and secure. We've completed the SOC 2 Type II audit that affirms our commitment to strong safeguards for handling your data. We're also in compliance with HIPAA and HITECH to meet the toughest standards for healthcare applications. We've also adopted the EU-US Privacy Shield Framework to ensure privacy of customer data shared through global commerce.

Our responsibility also extends to the environment. That's why we've blanketed the roof of our California headquarters with new solar panels to power our data center operations. This investment helps meet the need for security, profitability, and sustainability. Big data is a big deal, especially since there's an expectation that analytics will soon rule our lives. The need for data integrity will match its exponential growth.

MM: Do you plan on expanding your footprint into other countries and regions?

MELISSA:

Our global reach is a constant focus, and lately our efforts have been in the APAC region, plus movement into the Middle East. Increased staffing in the United Kingdom and Germany is also underway to support increased demand in European markets, especially in light of the General Data Protection Regulation (GDPR) which goes into effect May 25, 2018. This rigorous and extensive privacy framework has global implications, threatens substantial fines for non-compliance and presents considerable complication for some companies due to Article 17's 'right to erasure' clause. We'll continue to expand our global presence to help more companies move towards cleaner insights and a brighter future.

If You Don't Find Data Quality Sexy, You're Not Doing It Right

Thomas C. Redman, *"the Data Doc"*

I recently published two articles, "Only 3% of Companies' Data Meets Basic Quality Standards" and "Seizing Opportunity in Data Quality," that clarified the current state of data quality (pretty darn bad) and the opportunity that getting in front of data quality issues presents (enormous!). The feedback has been terrific. Still, not all companies and government agencies give data quality its due. A number of people have commented that the lack of attention stems from the fact that data quality isn't sexy. Yet, some point out that data scientists have the sexiest job of the 21st century and that companies are racing to analytics, artificial intelligence and monetization.

I appreciate the insight.

My response has three components. First, I did not realize that sex appeal was so critical in business. I had, and still have, every hope that companies and government agencies would be run by more serious adults who evaluate opportunities on more substantive terms and who see the opportunity in data quality - to satisfy customers, create marketplace advantage, cut costs, build stronger companies and empower people. — Who knew that it takes a lot of high-quality data to properly train an artificial intelligence and that better data means better data science and more opportunities to monetize their data? — They wouldn't be seduced by the latest shiny new thing. Certainly, this has been the case for those I've had the pleasure to work with these many years.

Second, I fully agree that there is nothing sexy about the way most companies approach data quality today:

1. **Correcting another department's errors before you can do your own work is tedious, time-consuming and frustrating.**
2. **Holding up a big decision because "the numbers don't look right" and you need to check them is a big turn-off.**
3. **Spending more of your time on mundane data management tasks than doing your job - as a financial analyst, healthcare provider, geologist, data scientist or any other professional - is mind-numbing.**

This list could go on and on. There is nothing sexy in any of it.

Most companies approach data quality re-actively. People may have no choice but to take these steps today. After all, there are packages to deliver, shelves to stock, customers to sign up, reports to file and decisions to make. And bad data gets in the way. But while companies are accommodating errors on the one hand, they are making more on the other. This is not the right way to do data quality.

Sooner or later, companies have to attack data quality pro-actively — getting in front of the issues so they can quit making errors. When they do, I find that people:

1. **Rejoice when they can focus on the implications of the latest financial report, rather than questioning why two numbers disagree.**
2. **Have a sense of deep satisfaction when they've improved their company's position by taking tens of millions out of the cost structure, permanently.**
3. **Experience a real thrill when they can do things their competitors cannot, such as getting a drilling permit because regulators trust their data.**
4. **Spend more time helping their clients meet their financial goals and less time dealing with mundane errors in fees - which is enormously fulfilling.**
5. **Find it much more fun to come to work when they can do their jobs, rather than searching around for missing data.**

It bears mention that, unlike analytics or AI, practically everyone touches data in one way or another, and so gets to contribute to the quality effort. And they take great pride in doing so. Provocateurs, those who set their departments and companies on a new course, remember the experience as among the best of their careers; those who lead an improvement team that makes the root cause of persistent errors go away feel empowered as never before; and senior people know they've done their jobs when they put the right team in place to lead an all-out attack on bad data.

> Data quality, done right, improves business performance and empowers people.

In short, data quality, done right, improves business performance and empowers people! From where I sit, that is stunningly appealing. Yes, even sexy!

So, get started right away! If you are a professional or mid-level manager, you should first take a simple measurement (the "Only 3%" article outlines the steps) to find out where you stand. Unless you're one of the lucky 3%, chances are high that your results will disappoint you, as they highlight inefficiencies in your own work. Use your results to stimulate action. Specifically, find and eliminate the root cause of one of the categories of error that your measurement reveals. Move quickly — you should do these two steps without any additional resources and in no more than three months.

If you are a more senior executive, you should adopt a similar urgency in developing the case for data quality across your department, business unit or company. Sort out which data you need to accomplish your most important objectives and establish a baseline measure of quality for this data. Then work out how bad data is holding you back—be it wasting time or money, slowing your AI projects, or simply making it more difficult to run the department.

Finally, imagine a better future, where bad data is the exception, not the norm. This work requires no magic, special skills or advanced degrees, though you may wish to consult the "Seizing Opportunity" article as you go.

Please note that I am not exhorting people or companies to do less when it comes to analytics, AI or monetization. Indeed, I think most companies should accelerate that work. Nor am I advising that they spend more on data quality. Quite the opposite — addressing data quality properly will reduce costs dramatically as the number of new errors decrease. And, better data will provide a big boost to your other efforts.

Sexy indeed!

MAK The Global Address Indexing Goal

By Christopher Jones

Melissa's address verification services are rapidly approaching a pinnacle that combines the best available global address servicing through a reliable index of numerical keys. Integral to the regimentation of accurate addresses is the invention and implementation of the **MAK™ (Melissa Address Key™)** and the index comprised of these keys. While some may see the inherent benefit of such a system, others may wonder how and why these coded addresses are going to become increasingly more important. Here, we offer a profile of the benefits of this technology, and the myriad of applications it could potentially be used for.

WHAT IS A MAK?

Fields like locality, dependent locality, double dependent locality, administrative area, sub administrative area and subnational area are required to store global addresses, and once they are stored, they aren't easy to use. Melissa Address Keys are randomly created as global unique address keys using a 10-digit number, which makes it much easier to store, especially when considering the complex hierarchies of international address fields. Additionally, no matter the underlying changes to the address data, you still get the same MAK number. You don't have to process millions of records regularly - you just have to update the deltas.

Example US Business Address	
Information	**Example**
Addressee's name	Mr. John Doe
Company/Organization	Supersystems Inc.
Department	Learning and Development
Suite Number	Suite 204
Street	1055 Foster Square Ln
City	San Mateo, CA
Zipcode	94404

Here is an example of a business address compared to a MAK number.

Example US Address	
Information	**Example**
Addressee's name	Mrs. Jane Doe
Suite Number	Apt 3
Street	4283 Coconut Rd
City	West Palm Beach, FL
Zipcode	33406

Example US Address	
Information	**Example**
Addressee's name	Mrs. Jane Doe
Suite Number	Apt 3
Street	4283 Cocoanut Rd
City	West Palm Beach, FL
Zipcode	33406

Since MAKs are numbers - you don't need to worry about vanity-name issues (Chicago Heights or Chicago), city or street name changes or ZIP® changes. The changes are recorded automatically, and all you need to do is perform the delta loads.

WHY DO WE NEED A MAK?

Previously, the only way to uniquely identify an address was with the actual address itself. Searching and matching records by address was an imprecise process, and even slight variations in the address or its presentation could cause incorrect matches. With Melissa Address Keys, for any given U.S. or Canadian deliverable address – and soon in Great Britain as well - Melissa can return a MAK that uniquely identifies that location. No matter how much a location's address is changed by the USPS or governing entities in another country, its MAK will remain the same. Especially for countries with multiple official languages, observing diacritics such as an accent or cedilla is further simplified using the MAK. Depending on the language, a letter modified by a diacritic may indicate a new, distinct letter or as a letter-diacritic combination. Relying on direct string comparisons complicates collation and presents a minefield of potential errors and duplicates, but referencing the MAK key for a given address will provide all the variations for any official languages in a given country.

EFFICIENT DATA PROCESSING

There are numerous other features that the implementation of a Melissa Address Key and its corresponding table provide. The resolution of the MAK is detailed and accurate to the apartment or suite level. For apartment buildings or office suites, this is achieved through a 'base MAK' which is assigned to the entire building or structure, so that one can determine the 'base location' of the apartments or suites within. A separate MAK number indicating the floor and number is assigned for each apartment, suite or unit residing inside of that base location. Since MAKs are simply 10-digit numbers, MAKs provide for more efficiency in data transfer and this makes them extremely efficient to store.

Searching and matching records can be accomplished easily using the MAK, in fact this implementation renders the process practically trivial: MAKs can be attached to any piece of address-oriented information, replacing difficult address searches with simple integer lookups. End users are provided MAKs for addresses, and are able to retrieve information from Melissa using only the Melissa Address Key. Melissa provides MAK update lists to end users indicating addresses that have recently changed - due to updates in USPS® ZIP Code™ encoding for example – which minimize the amount of data that the user has to process with products such as Address Object.

MAKs can provide further data anonymity and privacy, because users can remove address information from data and replace it with a MAK. In addition, MAKs are assigned randomly, so nobody can determine a location with just the MAK, nor can anyone create a MAK solely using address information.

The MAK really shines when it comes to security and compliance. The MAK essentially converts traditional personally identifying information (PII) fields like names, numbers, email and home addresses into non-PII by representing sensitive information with a random 10-digit number. Balancing data utility with privacy is a central concern for heavily regulated industries like finance and healthcare. Anonymous patient records could enable an expansion of data sharing in research and patient care, and some endeavors previously considered too onerous due to security, compliance and privacy restraints become unshackled using MAK.

Aggregate use of the individual Melissa Address Keys can supply insights for the enhanced allocation of resources like water, assistance in gas and waste utility management, improved risk assessment, more accurate analytics, and the ability to optimize route planning. A complete database of residential and business addresses that is easily accessible by fire departments or emergency call centers can quickly identify an address and ensure help reaches the correct location immediately - an invaluable feature with ubiquitous global appeal.

Looking Towards the Future

Melissa intends to create MAKs for addresses throughout the world. This ambition is important because there are no address standards for some countries like India and Ghana, a shortcoming which makes emergency aid as problematic as common deliveries. The implementation of the MAK will provide all the aforementioned benefits of using these address keys, plus catapult regions previously suffering from simple address issues into the 21st century.

Although the exact order of MAK rollouts and development cannot be promised at this time, there is significant progress underway for Great Britain, and addresses in Italy are currently under development as well. Once implemented, Melissa provides the deltas in a list of MAK keys – eliminating any need to run hundreds of thousands of records to find the ones that have changed.

LOCATION INTELLIGENCE

Melissa will continue to roll out products that leverage the MAK, including geo-spatial searches, deduplication, property shape data and more. Because this technology is proprietary, Melissa has the ability to tie in complementary location intelligence to a MAK, making this a comprehensive and pivotal key for almost limitless amounts of interdisciplinary information.

With increasing amounts of comprehensive data from aggregate sources, location analytics centered around the Melissa Address Key become a powerhouse of information - analogous to molecules on the head of a pin. You can read about new Melissa products that utilize MAK technology on page 37.

MELISSA SPOTLIGHT | MAT

Melissa Address Table (MAT)

COMPLETE REFERENCE DATA FOR EVERY U.S. ADDRESS

Melissa's Master Address Table (MAT) dataset offers information on every address—residences, businesses, apartments, suites and PO Boxes. No matter how an address changes, or if new addresses become available, you know exactly what the changes are. How can businesses and municipalities benefit from a complete database of all residential and business addresses, including location-based information?

- **Optimized route planning** and reduced response times for first responders
- **Improved resource allocation**
- **Increased security and anonymity** masks Personally Identifiable Information
- **More efficient utilities management** like waste collection and water allocation
- **More accurate analytics**

All the Addresses in a Neighborhood Map

All the Addresses in a Congressional District

Get all the addresses associated with a specific school district, ZIP Code (or group of ZIP Codes), city or any shape-based search like a radius or polygon. Filter your order and get a real-time count based on the search parameters that best fit your needs.

THE "KEY" MAKES MAT UNIQUE

Each U.S. and Canadian address is assigned a Melissa Address Key (MAK), a 10-digit number that never changes. This address key identifies a discrete physical address and aligns a multitude of additional information. MAT includes all of the following data points, including information on undeliverable addresses:

When you purchase MAT, you have complete coverage, and complete intelligence on all of the valid addresses within a given area.

FULLY CUSTOMIZABLE ONLINE ORDERING!

KEY FEATURES

- 200+ million U.S. and 12+ million Canadian addresses including PO Boxes, apartments and suites
- Customized selection by ZIP Code, city, town, county, state, postal code, voting district or any shape-based search
- Get the latitude/longitude coordinate for any U.S. or Canada address including census data and address type (residence or business)
- Ideal for analytics, mapping, risk management and logistics applications
- Easily order online – subscription includes quarterly updates

Visit www.melissa.com/mm-mat to get a free count today!

The 411 on Data Provider Compliance

By Bud Walker

With privacy and security being major issues of the day, it is important to understand the implications of processing Personally Identifiable Information or PII, and ensure that the vendor that you contract with for identity verification, address and contact data related services and data quality also maintains compliance with major standards and can be held accountable for the caretaking and provenance of critical data assets.

A good vendor is held accountable for its processed information, both by consumer privacy expectations and by laws and industry codes established by government entities and industry organizations around the world. At the very least, a good vendor should provide or comply with the following laws or self-regulatory codes:

SSAE 16/SOC 2

In the financial services industry, company-wide SOC 2 Type II audits are required to be conducted on an annual basis to have a company's processes, procedures and controls formerly evaluated and tested by an independent accounting and auditing agent that is AICPA authorized. SOC 2 Type II is the corporate industry's standard for an overall control structure to manage Business Continuity and Disaster Recovery programs, privacy, audit trails, and established roles, and it affirms the long-standing commitment to strong controls and safeguards for handling and processing data. In evaluating a vendor's compliance with SOC2, the trust-service principles of privacy and security are the most important as they showcase the vendor's ability to execute safeguards on PII.

HIPAA AND HITECH

Vendors that have achieved compliance with all data security standards outlined in the Health Insurance Portability & Accountability Act (HIPAA) are certified to handle PII. Healthcare providers, financial institutions, government agencies, and third-party data vendors that deal with PII are required to meet the most stringent data security guidelines of The Health Information Technology for Economic and Clinical Health (HITECH) Act, by Unites States law. Only a vendor that can measure and attest to the strict controls to keep patient information private and secure by HITECH is one that can be used for the processing of PII and issue Business Associate Agreements that establish responsibility for patient PII.

EU-US PRIVACY SHIELD

The Privacy Shield Framework was created by the U.S. Department of Commerce and is administered by the International Trade Administration (ITA) and comprises a set of requirements to transfer personal data from the EU and Switzerland to the U.S. Self-certified organizations that meet the framework's requirements will then be held accountable to maintain that commitment under U.S. laws. The EU-US Privacy Shield governs privacy policies that declare why personal data is collected and what its uses are.

ISO 27001

ISO 27001 is a specification for an information security management system, and defines a framework of policies and procedures that includes all legal, physical and technical controls involved in an organization's information risk management processes. ISO 27001 self-certification was developed to provide a model for reviewing, maintaining and improving an information security management system. ISO 27001 manages all aspects of security from documentation, management roles and responsibility, audits, continual improvement and corrective and preventive action.

PCI DSS

The Payment Card Industry Data Security Standard (PCI DSS) is a set of security standards designed to ensure that companies that accept, process, store or transmit credit card information maintain a secure environment while doing so. However, PCI is also used to determine the security of data sent, along with payment transactions typically containing name, address and postal codes. PCI DSS typically comes with penetration test reporting to make sure that transacting systems leverage fully secured and locked down endpoints.

The Hidden U.S. Risks of GDPR

What American Companies Don't Know About Their Data Will Cost $Millions

EXECUTIVE SUMMARY

New research from NAPCO Research and Melissa shows U.S. companies are still unprepared for the E.U.'s General Data Protection Regulation (GDPR) rules, which go into effect on May 25, 2018. These companies face significant risk of triggering fines up to €20 million or 4% of global revenue, whichever is higher.

NAPCO Research and Melissa surveyed companies with annual revenue of more than $10 million about their understanding of and preparedness for GDPR. The data reveals two areas where U.S. companies are significantly exposed to legal risk by these new regulations:

① Most U.S. companies do not adequately understand the challenges of GDPR, particularly the "right to be forgotten" guaranteed by Article 17 of the new regulation.

② Companies have a false sense of security that their current "Single Customer View" (SCV) platforms such as Customer Relationship Management (CRM), Customer Information File (CIF) and Master Data Management (MDM) customer hubs will be adequate for GDPR compliance, when in fact the more strict fuzzy record matching configurations of those current SCV platforms were not designed to meet the looser fuzzy match requirements of GDPR.

The hidden truth is that existing customer data platforms will fail GDPR compliance due to thousands of "False-Negative" match errors, each of those is a potential GDPR time bomb that could trigger the law's massive fines.

In order to survive the new Subject Access Rights regulations, it is essential that U.S. companies conduct GDPR audits that produce Right to Erasure risk metrics, used to prioritize resource allocations for updating the Single Customer View platforms and providing the foundation for GDPR compliance.

GDPR READINESS AMONG LARGE U.S. BUSINESSES

GDPR is one of 2018's most important business considerations. When the new regulations go into effect on May 25, E.U. residents will acquire significant new Subject Access Rights. At the same time, companies holding data on E.U. residents —

whether those residents are customers or not — will become responsible for enabling these rights, safeguarding that data and laying the groundwork to comply with these regulations.

Companies that do not meet these new standards risk triggering fines up to €20 million or 4% of global revenue, whichever is higher.

One of the most important rights GDPR guarantees is Article 17, the "right to be forgotten." Under this article, E.U. residents have the right to request the data a company holds about them, and demand it be erased from the firm's records.

Many European residents are already signaling that they intend to exercise those rights. According to a study by Pega, 82% of E.U. residents are likely or highly likely to request to see, limit or erase their personal data once GDPR goes into effect. Research from U.K.-based agency THE7STARS indicates that 34% of U.K. residents plan to exercise the right to erasure once GDPR is in effect.

Article 17 presents unique difficulties for modern marketing organizations with customer and prospect data stored in a multitude of systems, including often multiple, conflicting Single Customer View platforms that were not designed for this challenge.

In order to establish the readiness of large U.S. companies to comply with GDPR Article 17, NAPCO Research and Melissa conducted an online survey. The survey was seeded to the audiences of Target Marketing (marketers) and Total Retail (retailers) throughout February and March, 2018. The survey garnered responses from 156 respondents at companies with revenue of $10 million or more, spanning both retail and non-retail industries.

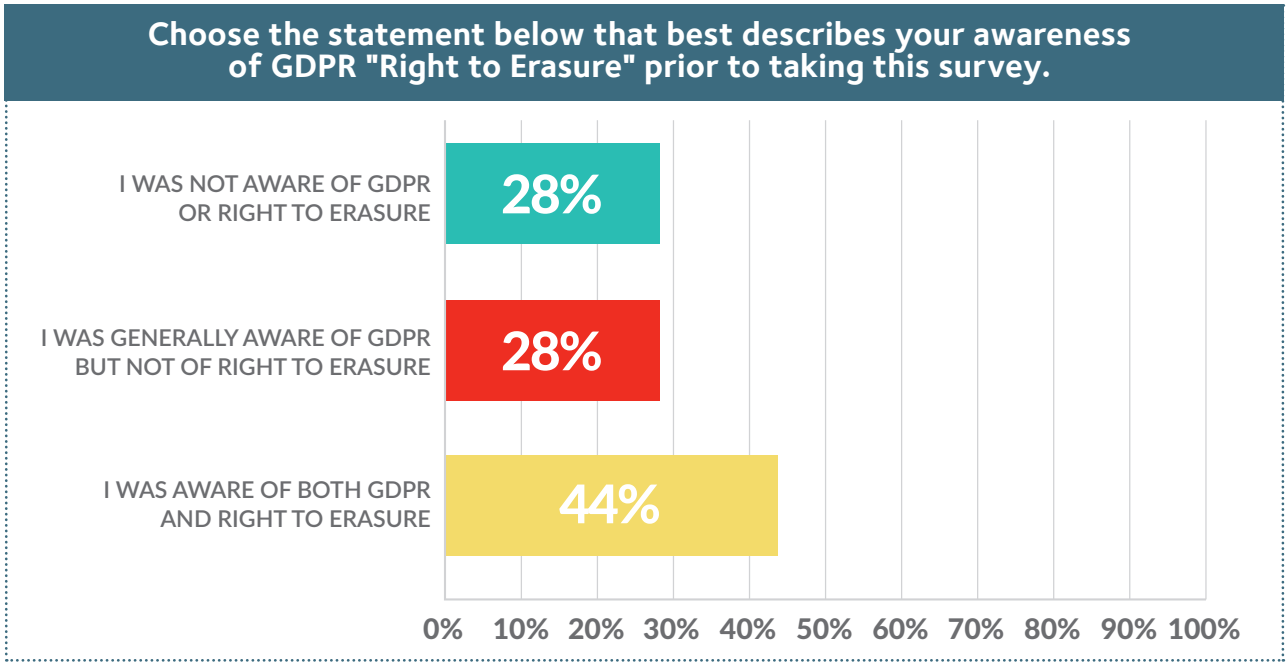
> The data subject shall have the right to obtain from the controller the erasure of personal data concerning him or her without undue delay and the controller shall have the obligation to erase personal data without undue delay…"
>
> **E.U. General Data Protection Regulations,** *Article 17*

The findings reveal that U.S. companies have significant exposure to heavy GDPR fines, and in many cases, they are not aware of the danger.

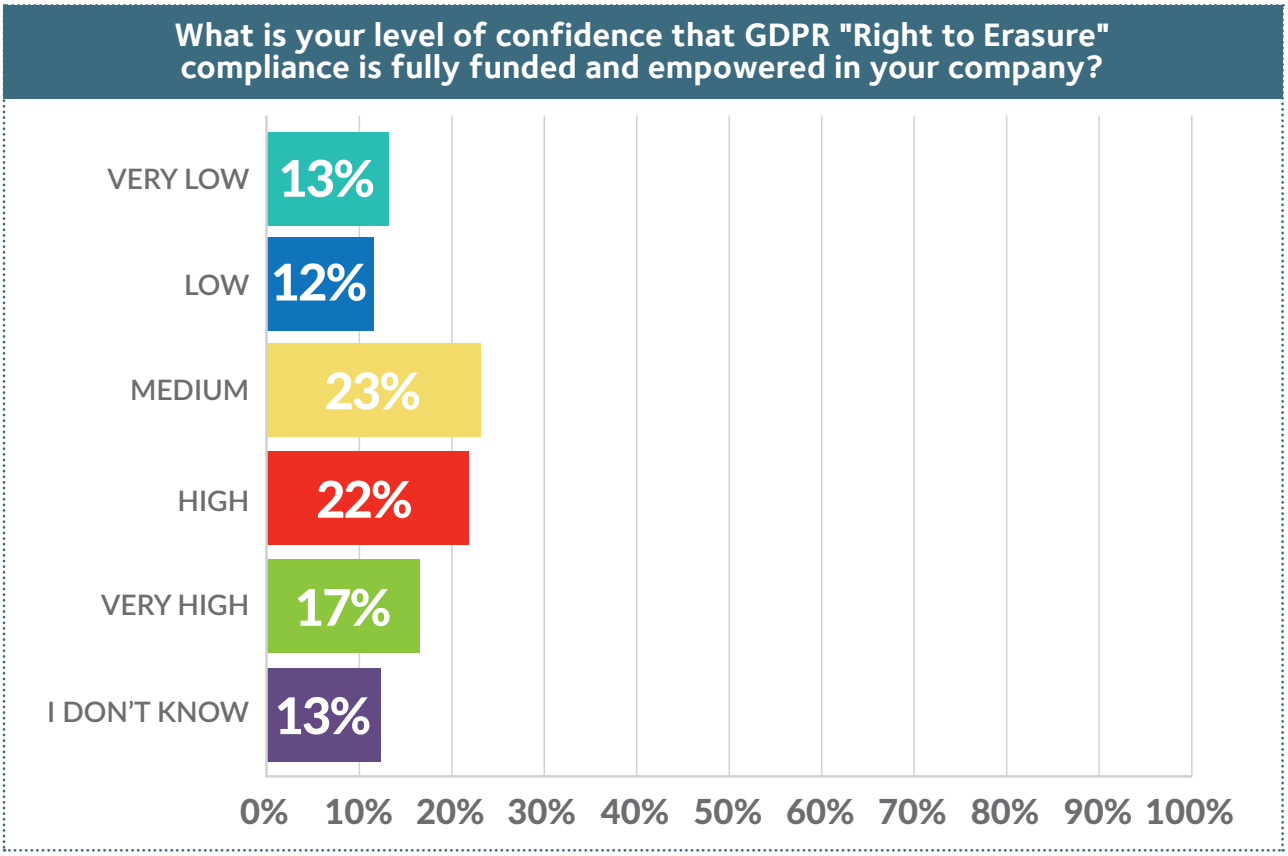
THE 'RIGHT TO ERASURE' BLIND SPOT

"The data subject shall have the right to obtain from the controller the erasure of personal data concerning him or her without undue delay and the controller shall have the obligation to erase personal data without undue delay…" E.U. General Data Protection Regulations, Article 17

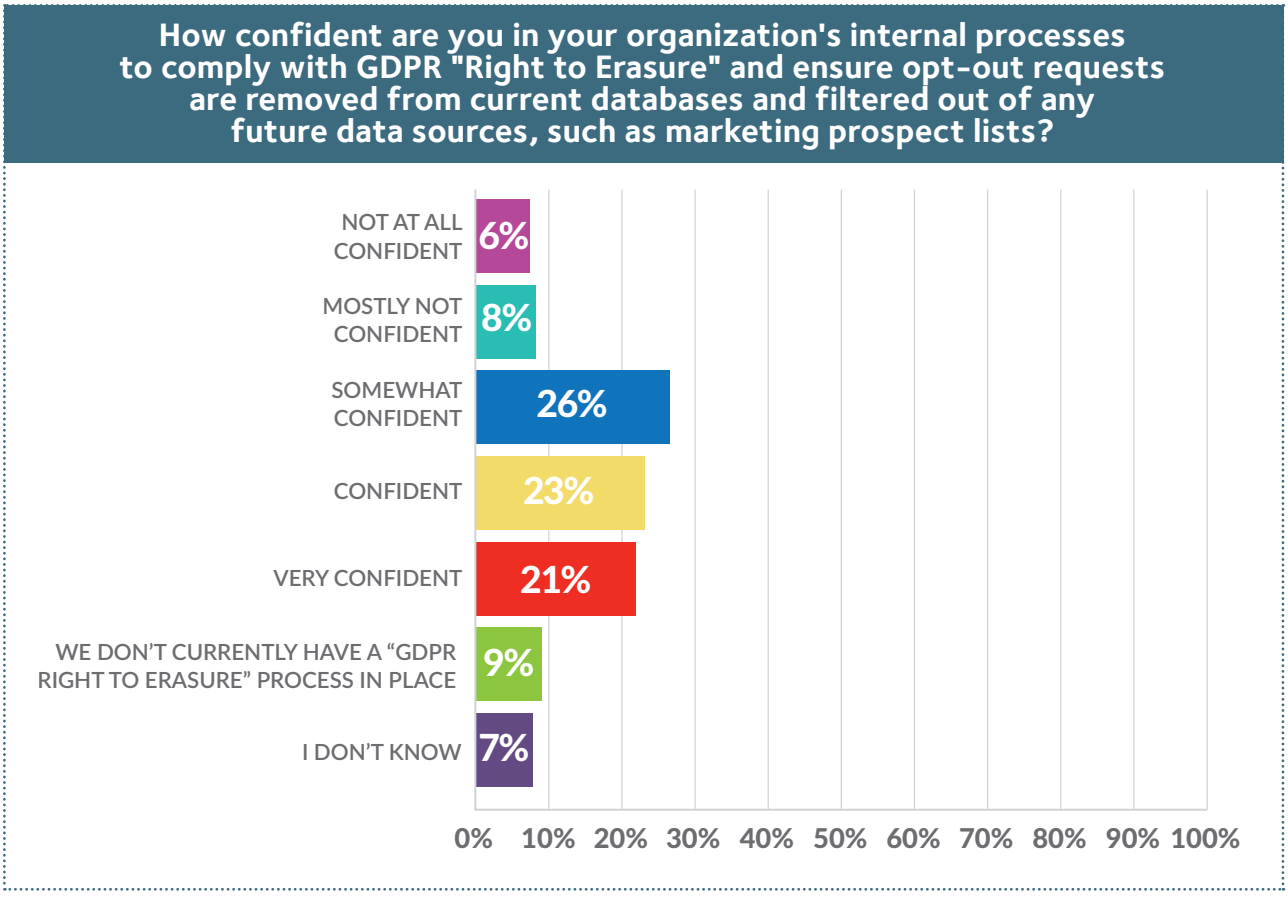
While enabling compliance with Article 17 will be a challenge for most U.S. companies, it will be even more challenging to overcome the blind spot companies have regarding GDPR exposure. In fact, less than half (44%) of companies surveyed (and remember, these are all companies with revenue more than $10 million) are aware of both GDPR and the "Right to Erasure" clause.



Even more concerning, although most of our respondents were not aware of the requirements for GDPR compliance, a large majority reported that they felt at least medium confidence that "Right to Erasure" compliance was fully funded and empowered in their companies. And nearly 40% said they were highly confident these requirements were being handled adequately.

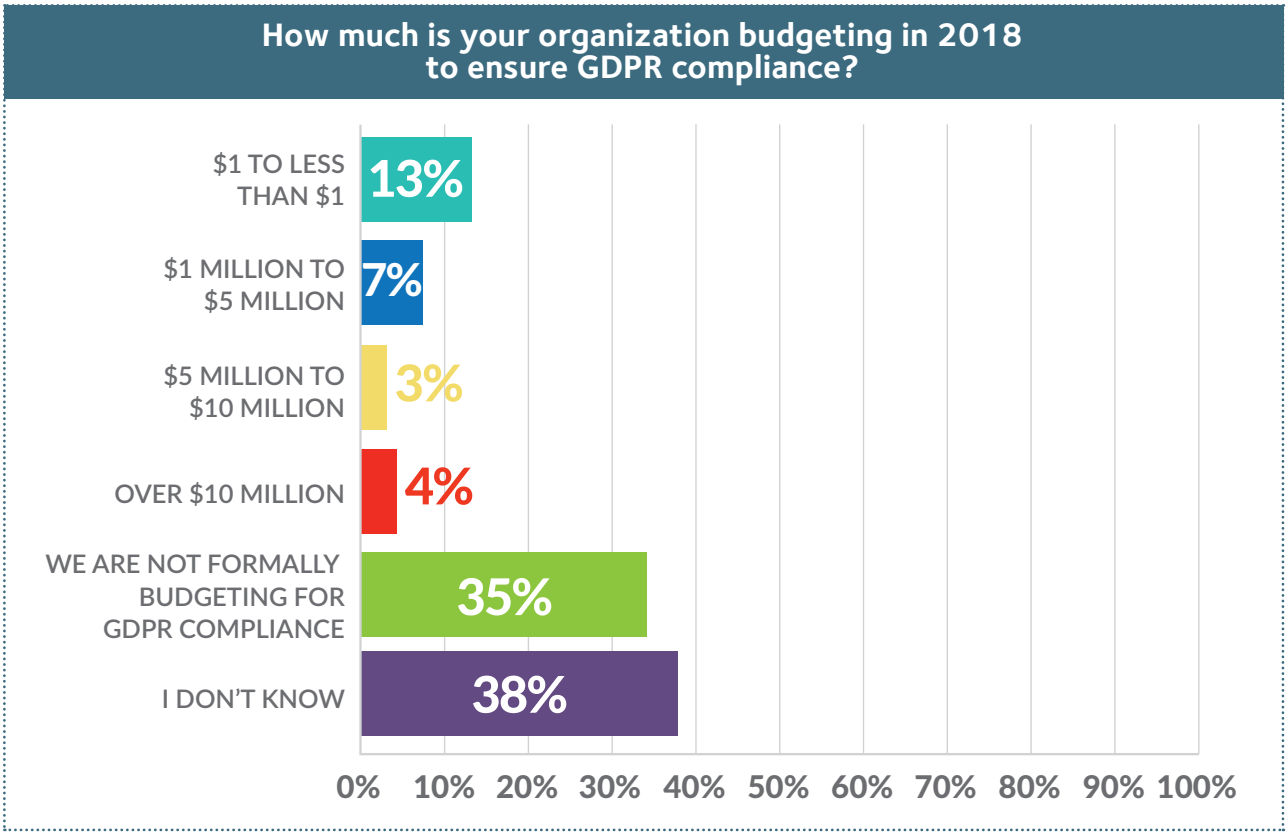


There is a similar sense of security around the ability to identify user records and comply with right to erasure requests. About 70% of respondents are at least somewhat confident in their companies' ability to comply, and 44% are confident or very confident. Only 7% say they do not know if they have the internal ability to comply.



This is a false sense of security. Most companies responding to this survey do not have an adequate understanding of the limitations of their Single Customer View platform accuracy that will make Article 17 difficult to enact, and this is a huge blind spot for GDPR compliance.

That false sense of security is leading U.S. marketers to under-invest in GDPR compliance initiatives. More than 70% of our respondents either did not know what their company was allocating towards GDPR compliance, or said no specific GDPR budget had been established. Another 13% are allocating less than $1 million to these efforts. All in all, only 14% are allocating more than $1 million to GDPR compliance.



WHY YOUR CURRENT SINGLE CUSTOMER VIEW WILL FAIL GDPR

It is widely agreed that GDPR requires a Single Customer View (SCV) such as for "Right to Erasure." Large organizations often have multiple SCV platforms such as CRM, MDM, CIF, Customer Data Platform (CDP) and other fuzzy record match engines.

These platforms have traditionally provided strong success. So executive management understandably assumes SCV is a "completed step" in their GDPR compliance roadmap that enables finding ALL of a customer's records despite factors such as nickname variations, different postal and email addresses, typos and other data quality issues.

And companies are using many such systems, not just one.

Con't on page 24

What's the Point?

By Admound Chou

In the address world, the difference between range data and point data is very important. This applies to verifying addresses, as well as the geocoding coordinates associated to those addresses. True precision and the quality of your address and geocoding provider, are key to making better business decisions and preserving the integrity of your business.

NOW ABOUT THAT ADDRESS...

When talking about range data versus point data, point data is the better option. Here is an example of the difference between range versus point data.

RANGE DATA

HOUSE NUMBER LOW	HOUSE NUMBER HIGH	HOUSE NUMBER ODD EVEN	STREET NAME
1	9	ODD	Main St
2	10	EVEN	Main St

POINT DATA

HOUSE NUMBER	STREET NAME
1	Main St
3	Main St
4	Main St
8	Main St
9	Main St

In this example, the granularity of the point data is better than the range data. The range data is typically the lowest and the highest house number allowed by design on a particular street. The point data is a more precise version where each actual house has its own record. As you can see from this fairly typical example, there are only five real houses on this street, while the range data allows for 10 possible houses.

If you had an input of 5 Main St., the range data would say it is correct because it is within the allowable range of the first record. However, with the point data, we could see that this is not a real house number.

THE VALUE OF RANGED DATA

Ranged data still holds great value and is incredibly useful when adding data quality to your address records. We can verify all the parts of the address and partially verify the house number. Melissa's Geocoding solution can fully verify street name and suffix, and partially verify the house number. This will allow you to ensure a high level of data quality for your address database. Using point data simply allows you to go one step further.

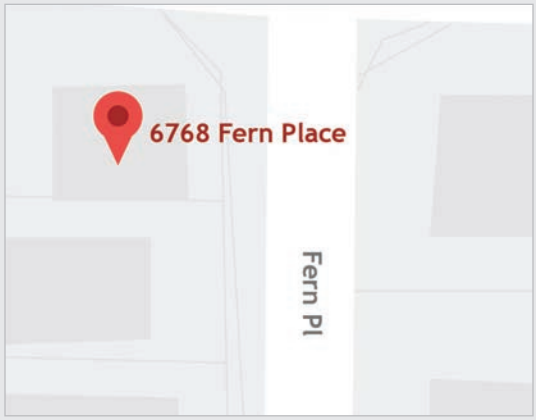
GEOCODING – APPENDING LATITUDE/LONGITUDE FOR A SPECIFIC ADDRESS

Geocoding is a product of address verification that is often just as important to the user as the address itself. There is a similar concept in geocoding. However, it is usually referred to as interpolated versus point. With points, it is similar to addresses as the data provider has a latitude and longitude coordinate for each specific address.

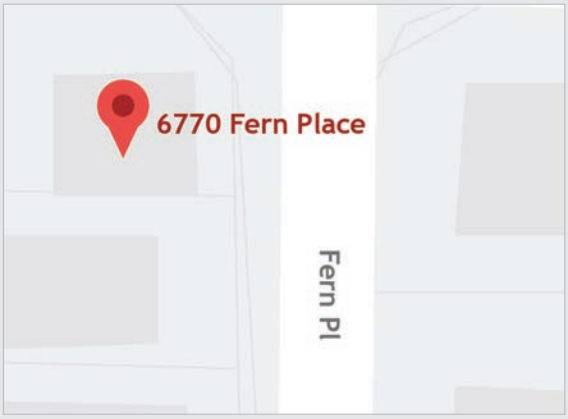
This is the best geocoding data available. However, if individual point data for each address is not available, we are often able fall down to the coordinate data for the street. This is called interpolation. The concept is to take the coordinate of the street as well as the beginning and ending house number to subdivide the street into logical shapes, each one representing a house. What is often done is also an algorithm to move the coordinate several feet away from the street to try and get it closer to the center of the property.

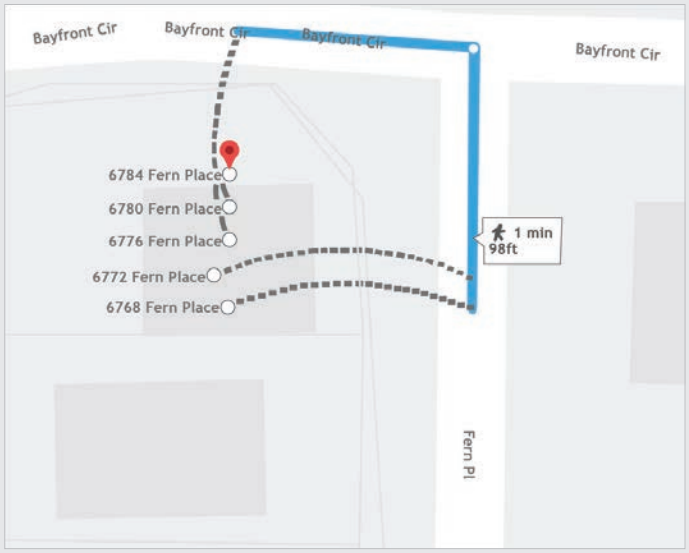
There are positives and negatives to interpolation. On the positive side: if you are dealing with shorter straight roads with accurate range numbers, the interpolated points will often be very accurate. Many times in denser cities, the interpolation will be pretty good. The downside is that if the roads are not straight or the range numbers are not very accurate, you can often end up with bad interpolation.

Here's an example:
A Google search for 6768 Fern Place returns the following pin.



A Google search for 6770 Fern Place returns the following pin.





Everything seems ok, yet when comparing the data side-by-side, you'll notice that Google pins both addresses to the same location.

One important thing to keep in mind is that your provider will most likely return a status or code of some type along with the latitude and longitude coordinates to indicate precision. It is important to understand this so that your expectation of the location of the coordinate is correct. If the coordinate returned is to the point level, you can reasonably expect the coordinate to land on a roof of the property or somewhere within the boundaries of the property. If the precision returned is less than that, like interpolated level, street level or locality level, you should realize that the coordinate should be close but may not necessarily land on the roof or the property.

Just like with address verification, point data is preferable but interpolated data is still incredibly useful. Data quality of any degree is better than none. However, knowing the difference can help you differentiate between your options and make the best choice for your business needs.

> After being underwhelmed with Google and Bing, we found Melissa's Data Quality Suite and Geopoints solutions. It was a terrific find. The accuracy is unmatched and the support is outstanding.
>
> **Jon Bohnert,** *Executive Vice President,* **Symmetry**

Melissa Helps Payroll Solution Provider Ease The Local Tax Struggle By Pinpointing Taxation Requirements To Exact Latitude And Longitude.

Identifying the correct withholding jurisdiction for an employee can be a challenge. Because of complex tax boundaries, 5-digit ZIP Codes™ can exist in multiple jurisdictions which can create incorrect withholding for an employee, extra work for the payroll department and force HR staff to spend time on data management instead of focusing on more meaningful work.

It's a problem Symmetry Software® meant to tackle with Payroll Point - Symmetry's online tool that delivers a detailed withholding tax list using an employee's residence and work address.

"Payroll Point started as a concept to help large employers pinpoint the right payroll taxes for new and existing customers," said Jon Bohnert, executive vice president of Symmetry. "There was no technology solution available to make this a simple process. HR and payroll departments often had to visit multiple government websites to obtain what was hopefully the correct tax information and set it up within the payroll system. This was an enormous pain point."

LOCATION IS KEY TO ACCURATE WITHHOLDING

To be accurate, Payroll Point needed to take a street level address, cleanse it of inaccuracies, return a fully cleansed address complete with a 9-digit ZIP Code and a precise rooftop latitude and longitude coordinate that could be compared against tax boundary shape files.

Originally Bohnert and his team utilized Google and Bing search functions to geocode their clients' addresses. That process proved to be tedious and time-consuming. It also didn't provide the most critical function Symmetry needed – the most accurate location of an address.

"After being underwhelmed with Google and Bing, we found Melissa's Quality Suite and GeoPoints solutions," said Bohnert. "It was a terrific find. The accuracy is unmatched and the support is outstanding."

Geopoints provides precise latitude and longitude coordinates to the exact delivery point of a street address ("rooftop") for more than 121,000,000 addresses in the U.S.

BETTER DATA, BETTER INSIGHTS

With Melissa's address cleansing features, Bohnert and his team were able to glean more insight into their address data with the help of "error" or "result" codes, for instance one error code may indicate an invalid ZIP Code, another indicates a required combination of address, city, state and ZIP Code is missing.

"With Melissa, we had dozens of error codes, which ultimately became a feature upgrade for Payroll Point," said Bohnert. "Our customers now have more and better data when it comes to problem addresses."

Strategies for Global Contact Matching

By Tim Sidor

It is possible to implement different matching strategies based on how you would like your records grouped, for example, by "address" or by "name and address." The former would match 'John' and 'Mary Smith' at the same household, whereas the latter would identify them as unique entities.

For Global processing, even after determining and selecting a general strategy, 'Address' for example, it might still require knowing the expected address formats of the source data that needs to be compared and thus reevaluate the logic.

In the MatchUp® Matchcode Editor, at first glance, a 'Global Address' matchcode might appear to be a safe accurate matching strategy.

Data Type	1	2
Country	☑	☑
Postal Code	☑	☑
Premises Number	☑	☐
Thoroughfare Name	☑	☐
Secondary	☑	☐
Post Box	☐	☑

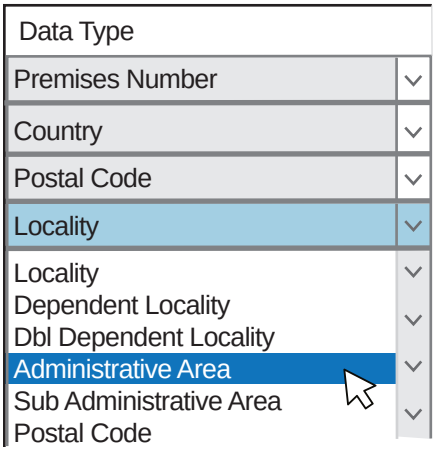
But knowing that some countries don't have a reliable Postal Code, which is usually the component MatchUp uses for efficient 'neighborhooding' (also known as 'grouping' or 'clustering'), how can you accurately match these records? Simply removing the Postal Code component would incorrectly match similar addresses that were in different parts of the country.

U.S. and Canada users are so used to using the reliable Postal Code that we rarely use City (Locality). But for processing countries without Postal Codes, or databases with multiple countries, adding a Locality can bring back accuracy and efficient clustering.

Data Type	1	2
Country	☑	☑
Postal Code	☑	☑
Locality	☑	☑
Premises Number	☑	☐
Thoroughfare Name	☑	☐
Secondary	☑	☐
Post Box	☐	☑

Configuring this matchcode to allow 'blank matching' on the Postal Code will accurately match records for most worldwide addresses and is a default distributed matchcode.

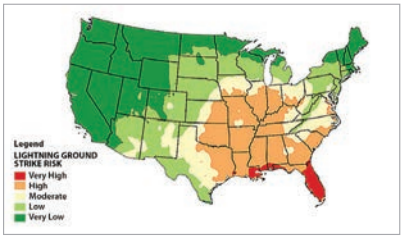
However, many countries distinguish addresses by also using a different hierarchy structure which may include a combination of Dependent Locality, Administrative Area and or Sub Administrative area. Or they use a Dependent Thoroughfare to distinguish the delivery address. So knowing the primary data types used in a countries standard address can help you decide the proper matchcode components to include in your matchcode.



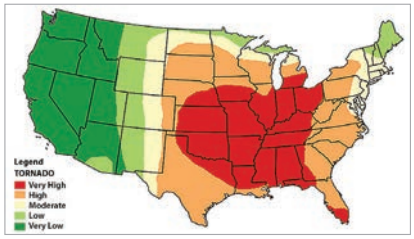
But how can you construct a good matchcode for specific region processing? Our 'Global Address, Locality' matchcode is a good basic strategy, but using Melissa's resources – such as Global Verification documentation and/or actual record processing and parsing can help you determine the necessary components to construct a matchcode to produce accurate results.

Making Data Work for Your Geospatial Challenges

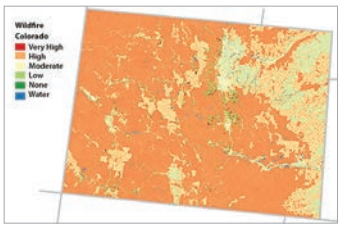
By John C. Siegman



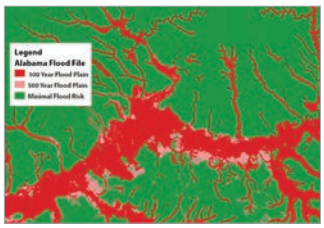
Ground Risk



Wind Risk



Wildfire Risk



Water Risk

Anyone who has looked at flood data knows that FEMA is not the answer. It's not that FEMA doesn't try to accurately map what they believe to be floodable areas. It's that FEMA is politically driven. As a city, you do not have to participate in FEMA mapping. Why would you not participate? Well, properties in flood zones tend to have lower valuations, and lower valuations tend to generate lower taxes. Even as an individual you can exempt yourself with a LOMA. A LOMA establishes a property's location in relation to the Special Flood Hazard Area (SFHA). LOMAs are usually issued because a property has been inadvertently mapped as being in the floodplain, but it is actually on natural high ground above the base flood elevation.

A Melissa customer wanted to sell flood insurance to prospects that were in flood zones but not likely to flood and not in flood zones but likely to flood. They had three primary targets, properties in 100-year flood zones that were not likely to flood, properties in a 500-year flood zone that were not likely to flood, and properties in FEMA minimal risk zones that were likely to flood. The customer realized that they needed a way to understand the current FEMA designation for the target properties but also have an independent flood likelihood evaluation of the property. For them, we created a sample set of customers utilizing HazardHub risk data that looked something like this:

Row Labels	Count of FEMA_flood
B: Covered by FEMA digital maps. Minimal to No Risk of Flooding	17428
B: > 4,800 feet from OR > 20 feet above nearest flooding water feature. Minimal risk of flooding.	249
B: > 4,800 feet from OR > 20 feet above nearest flooding water feature. Minimum risk of flooding.	8627
C: < = 2,400 feet from AND > 10, but < = 20 feet above nearest flooding water feature. Moderate risk of flooding.	1119
C: < = 3,200 feet from AND > = 6, but < = 20 feet above nearest flooding water feature. Moderate risk of flooding.	1330
D: < = 3,600 feet from AND > 4, but < = 10 feet above nearest flooding water feature. High risk of flooding.	1166
D: < = 4,400 feet from AND > 2, but < = 6 feet above nearest flooding water feature. High risk of flooding.	532
F: < = 4,800 feet from AND < = 2 feet above nearest flooding water feature. Very High risk of flooding.	2257
F: < = 4,800 feet from AND < = 4 feet above nearest flooding water feature. Very High risk of flooding.	2101
No data for current coordinates.	47
D: Covered by FEMA digital maps. In 500 Year Floodplain	1051
B: > 4,800 feet from OR > 20 feet above nearest flooding water feature. Minimal risk of flooding.	9
B: > 4,800 feet from OR > 20 feet above nearest flooding water feature. Minimum risk of flooding.	200
C: < = 2,400 feet from AND > 10, but < = 20 feet above nearest flooding water feature. Moderate risk of flooding.	64
C: < = 3,200 feet from AND > = 6, but < = 20 feet above nearest flooding water feature. Moderate risk of flooding.	98
D: < = 3,600 feet from AND > 4, but < = 10 feet above nearest flooding water feature. High risk of flooding.	120
D: < = 4,400 feet from AND > 2, but < = 6 feet above nearest flooding water feature. High risk of flooding.	79
F: < = 4,800 feet from AND < = 2 feet above nearest flooding water feature. Very High risk of flooding.	179
F: < = 4,800 feet from AND < = 4 feet above nearest flooding water feature. Very High risk of flooding.	295
No data for current coordinates.	7
F: Covered by FEMA digital maps. In 100 Year Floodplain	1116
B: > 4,800 feet from OR > 20 feet above nearest flooding water feature. Minimal risk of flooding.	7
B: > 4,800 feet from OR > 20 feet above nearest flooding water feature. Minimum risk of flooding.	102
C: < = 2,400 feet from AND > 10, but < = 20 feet above nearest flooding water feature. Moderate risk of flooding.	84
C: < = 3,200 feet from AND > = 6, but < = 20 feet above nearest flooding water feature. Moderate risk of flooding.	82
D: < = 3,600 feet from AND > 4, but < = 10 feet above nearest flooding water feature. High risk of flooding.	149
D: < = 4,400 feet from AND > 2, but < = 6 feet above nearest flooding water feature. High risk of flooding.	90
F: < = 4,800 feet from AND < = 2 feet above nearest flooding water feature. Very High risk of flooding.	278
F: < = 4,800 feet from AND < = 4 feet above nearest flooding water feature. Very High risk of flooding.	322
No data for current coordinates.	2

Then they created a targeted list by selecting B and C score prospects from the 100-year and 500-year flood plains and D and F score prospects from the minimal risk flood zones. This scoring and these selections are available nationwide and provided the customer with the ability to selectively target the types of customers that they were interested in from a risk exposure perspective. While this example discusses flood, this works for any natural hazard where properties are exposed, both personal property as well as commercial property.

If you have data challenges to solve, perhaps the Melissa team can offer the location intelligence solution needed. Melissa supports geospatial professionals in the goal of mapping innovation in location-based services, analytics and decision-making powered by location intelligence. We provide a wealth of location data enrichments including global geocoding to derive latitude and longitude from an address, and geo-enriched data for IP addresses. We offer other types of specialized data including U.S. property and mortgage data (type and number of buildings on a parcel, property age, construction, sales value and more), demographics (household income, marital status, residence data, credit information and more), and risk and natural hazard information (wind, water, ground and wildfire) that can be linked to location data to reveal relationships and trends. Our data feeds easily into popular data visualization and analytics platforms for ease of use and up-to-the minute accuracy. When you need to solve global challenges with geospatial technology, turn to Melissa - your single, trusted source for authoritative reference data.

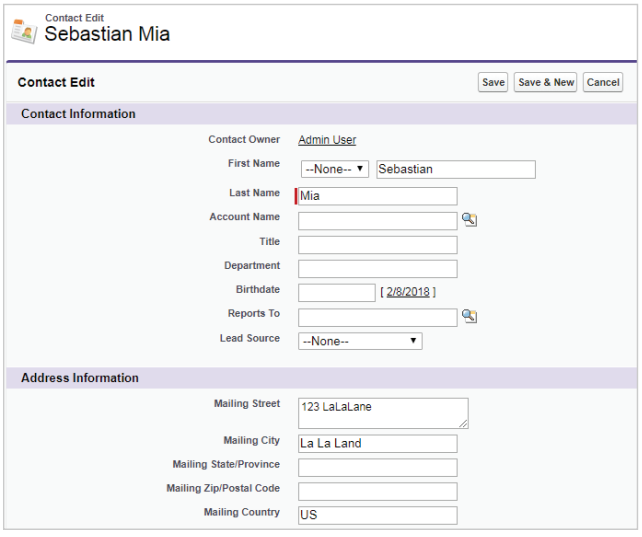
Is Your CRM Database a Perfectly Oiled Machine?

By Samuel Chung

When accounting for leads, managing the relationships you maintain with your clients is of the utmost importance. The purpose of customer relationship management (CRM) software is to help manage your interaction with your customers and improve customer retention. These programs generally focus on storing the data you have on your customer through different stages of the business relationship, keeping track of any relevant information. This information is then leveraged to better market to your customer base. The intention is to improve the efficiency with which you can maintain the relationship you have with each customer. When all parts of this mechanism are functioning properly, you would ideally be able to call or email your customers for updates and send out mailings simply.

Unfortunately, we don't live in such a perfect world where every gear is oiled perfectly and whirs to life to work for you. At its heart, CRM programs store data and where there's data, there's bad data. These errors can enter your database in several ways, whether it is from a representative typing "Isle" for a street when the correct word is "Aisle", customers rushing to fill out a form and mixing up letters or numbers in their information, or old data expiring in your database.

Without a way to check whether or not the information that exists in your database is valid or even properly formatted, the ultimate purpose of these CRM programs just leads to headaches and additional costs. There's generally no way to tell if that address you have in your record is an actual address until you've made the mailing and have received a return as well as a complaint from the customer that did not receive what they were supposed to.



Out of the box, there is no way to know if this address is a valid address or not, aside from common sense.

CRANK UP THE ENGINE WITH MELISSA'S CRM PLUGINS

In order to address this issue, we have released several plugins that install directly into two of the most popular CRM programs: Salesforce® and Dynamics®. With these plugins, you can stop bad data from entering your database at its source – point of entry. These plugins are designed to prevent bad data from entering your system as well as streamline the point-of-entry process.

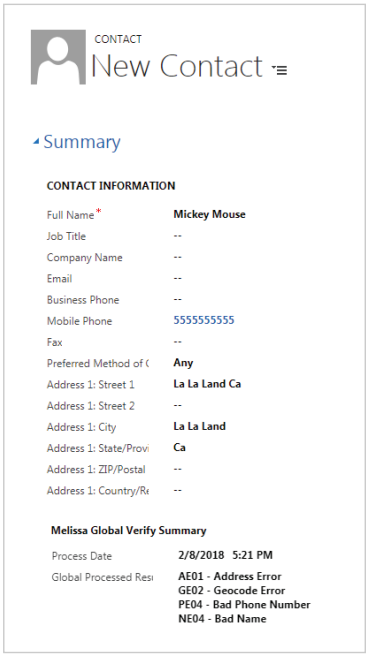
The plugins have the capability to validate international addresses, as well as return geographical information such as latitude and longitude. Plus, they verify phone numbers are live and callable and that email addresses are deliverable, in real-time. You can also append missing contact data, update invalid addresses, enrich your contacts with detailed demographics, business firmographics, and property and mortgage information – the list goes on.

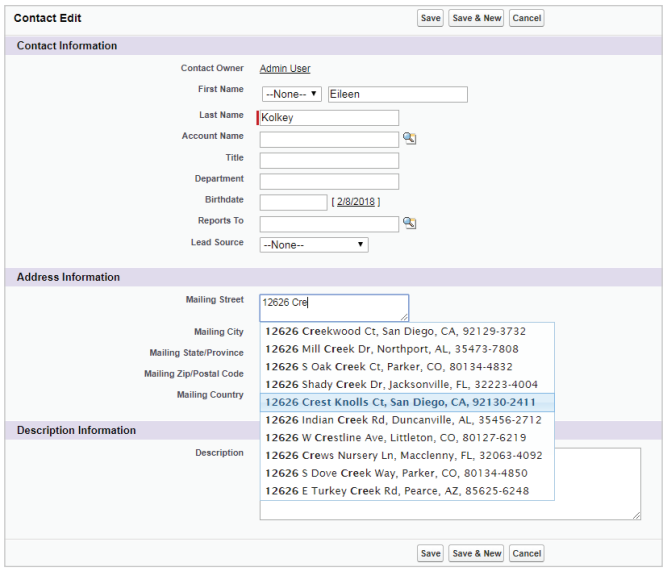
The products and services that are offered through our plugins can address almost any need regarding bad data within your CRM systems. All of these plugins rely on cloud services at their core, ensuring that the data associated with each plugin is updated on our end on a regular basis.

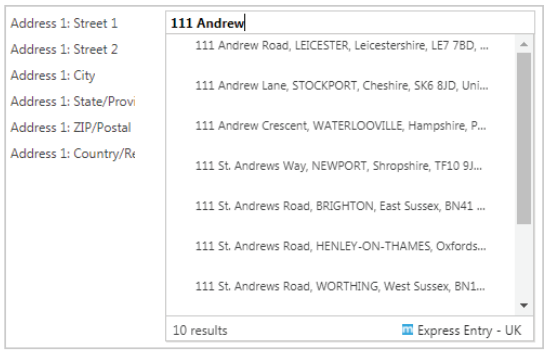
In addition, our developers are constantly working to improve the functionality within each system to better support the needs of our customers, as we know each system can be unique.

With these plugins in place, the problems of bad data will no longer hinder what CRM software was intending to accomplish. It will finally do what it was meant to do and allow you to keep up to date with your customers without letting the bad information you might have cost you. For more information regarding these plugins, please visit our website and reach out to a sales representative.

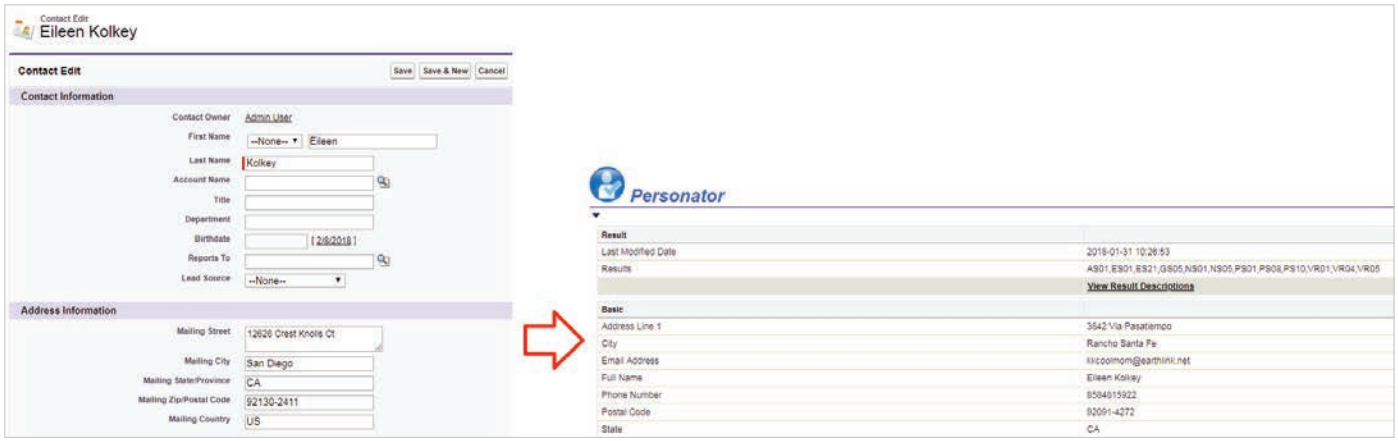
With our tools in Dynamics, you can identify a bad address, name, phone number and email in real time directly on your form.







Our address auto-completion tool, Express Entry®, can help reduce the margin of error at the point of entry level in Salesforce (left) and Dynamics (bottom).



Personator® can update an old address of a contact to their new address as well as add missing information such as an email address or phone number.

MELISSA CRM Suite

Melissa's plugins for Salesforce and Microsoft Dynamics and Excel provide you with the tools to enhance your CRM data quality by cleaning, deduping and enriching all your People Data – names, addresses, phones, emails and more. Here's a list of the capabilities offered in the plugins:

GLOBAL CONTACT CHECKING

Clean, correct, and standardize your U.S., Canada and international contacts. Add missing email, phone, and address info to complete records. Includes geocoding for 40+ countries.

GLOBAL EXPRESS ENTRY®

Get a suggested, verified address as you type – making data entry easy and accurate, while also reducing keystrokes by as much as 50%.

SMARTMOVER℠

Update addresses of U.S. and Canadian customers who have moved to reduce undeliverable mail and stay in contact.

MATCHUP®

Remove duplicate leads, accounts and contacts and maintain a single, accurate view of your customer.

BUSINESSCODER®

Validate business addresses and add firmographic info like location type, sales volume and name/title and contact info for 25 million U.S. businesses.

PROPERTY

Access detailed property and mortgage info on more than 110 million U.S. properties including owner contact info, assessed value, deed information and more.

LEADGEN

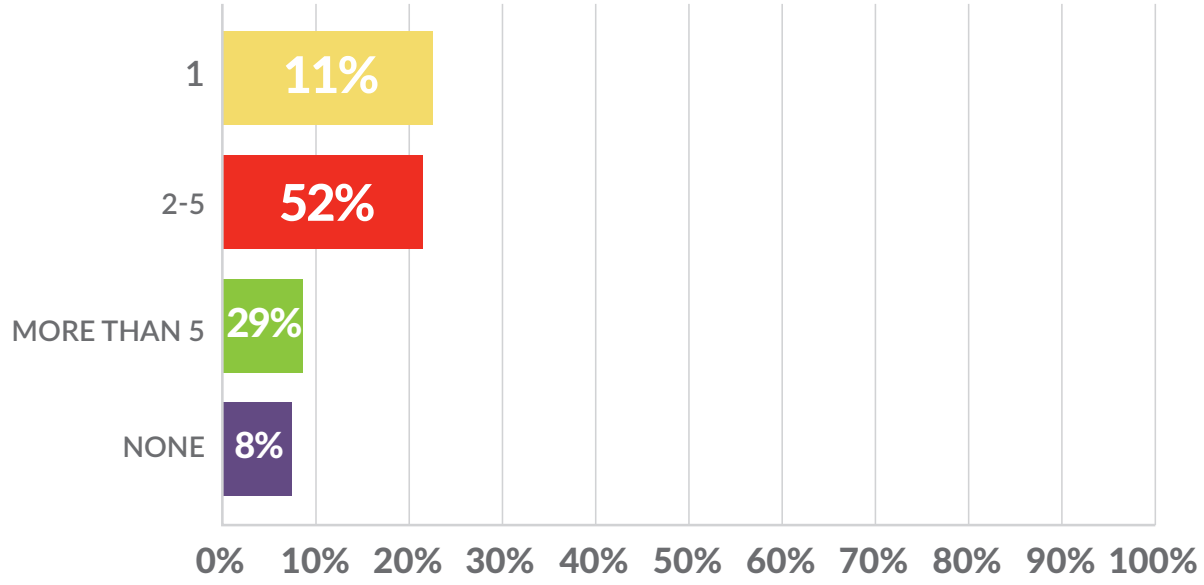
Access and download customizable lead lists for marketing and sales initiatives. Reach consumers, property owners, new movers and more.

www.melissa.com/mm-crm

Con't from page 15 - The Hidden U.S. Risks of GDPR

A Single Customer View is an aggravated, consistent and holistic representation of the data known by an organization about its customers that can be viewed in one place, such as Customer Data Platform (CDP) or Master Data Management (MDM) customer hub.

How many Single Customer View platforms are used, including enterprise versus department-only, in your company (such as for Marketing Automation, Analytics, CRM, MDM and Regulatory Compliance?)



The question behind this chart specified that a single customer view is an aggregated, consistent and holistic representation of the data known by an organization about its customers that can be viewed in one place, such as a CRM, CDP or MDM customer hub.

Nearly 80% of respondents report using more than one Single Customer View platform, and 30% use more than five.

These responses indicate that many organizations have multiple SCV platforms with likely conflicting fuzzy record match results. The ramification of these conflicting match results is that False-Negative match errors exist – the only question is how many?

MOVING THE RECORD MATCH GOALPOSTS

Configuring fuzzy match algorithms of these platforms basically determines the balance point between False-Negative errors (incorrectly not matching records) versus False-Positives (incorrectly matching records of different people).

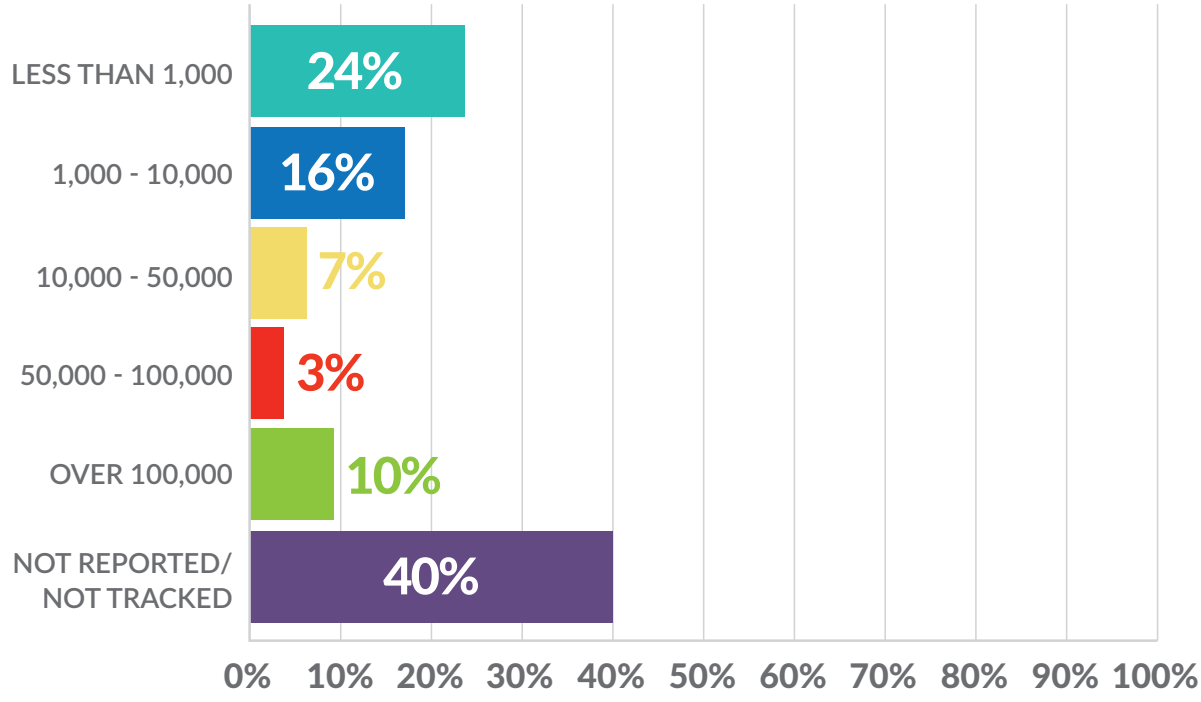
Despite their past success, all traditional SCV systems share a common problem for GDPR compliance - their original fuzzy match business requirements are heavily skewed on the side of False-Negatives to minimize the risk of any False-Positive errors.

Before GDPR, False-Negative match errors could be dismissed as only being "minor mistakes" that had minimal negative business impact such as a customer or prospect receiving duplicate marketing messages, analytics being slightly skewed in a "statistically irrelevant" way, etc.

But GDPR turns that traditional equation on its head, as succinctly articulated by Steve Eckersley, Head of Enforcement at the Information Commissioner's Office (ICO), who said: *"What people may think is a minor mistake could lead to the loss of their job, a day in court and a fine."*

And yet, a full 40% of respondents reported that they do not even track these errors. Another 34% reported 1,000 or more such errors in 2017. This chart alone should drive home the size of the blind spot companies have to their GDPR compliance risks. The sheer volume of False-Negative errors lurking in U.S. customer databases — many of which are not documented and not tracked — shows the reality of the extreme compliance failure risks faced by most companies. More simply, companies can't erase what they can't find – and GDPR requires companies to reliably find ALL of a customer's or prospect's data regardless of variations and data quality errors in name, address, email, phone number and other traditional record match attributes.

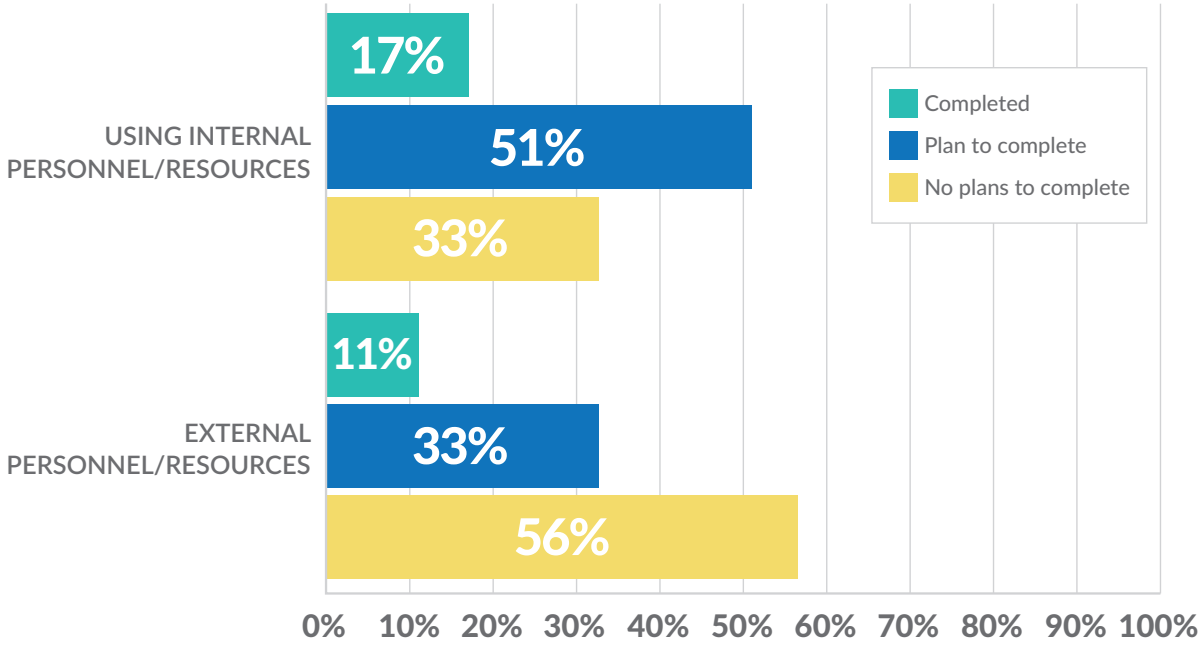
How many "False-Negative" match and search errors (duplicate customer and prospect records not linked or found due to nickname variations and data quality errors in name, address, phone or other key attributes) were reported across all databases during 2017?



Each of those errors is a potential GDPR violation. Worse, the 40% of companies in the chart above who answered that these errors are not reported/not tracked have no way to quantify their risk.

There are steps that can be taken to alleviate such risks. The first step is to conduct a GDPR Right to Erasure Risk compliance audit that quantifies False-Negative error rates, and thus compliance failure risks.

Has your organization completed, or does it plan to complete, a right to erasure audit?



As of March, when this survey was completed, mere months before the regulation goes into effect, only 28% had completed a right to erasure audit. While half (51%), still planned to complete one using internal resources, and 33% plan to complete one using external consultants or agencies, those numbers are actually quite low. Judging from the answers to other questions in this survey, it may not be reasonable for half of companies to expect an internally-led GDPR audit to identify all the vectors of exposure to GDPR compliance risks. Companies should look for outside experts to at least guide, if not lead, these efforts.

CONCLUSION: 3 STEPS TO TAKE FOR GDPR COMPLIANCE

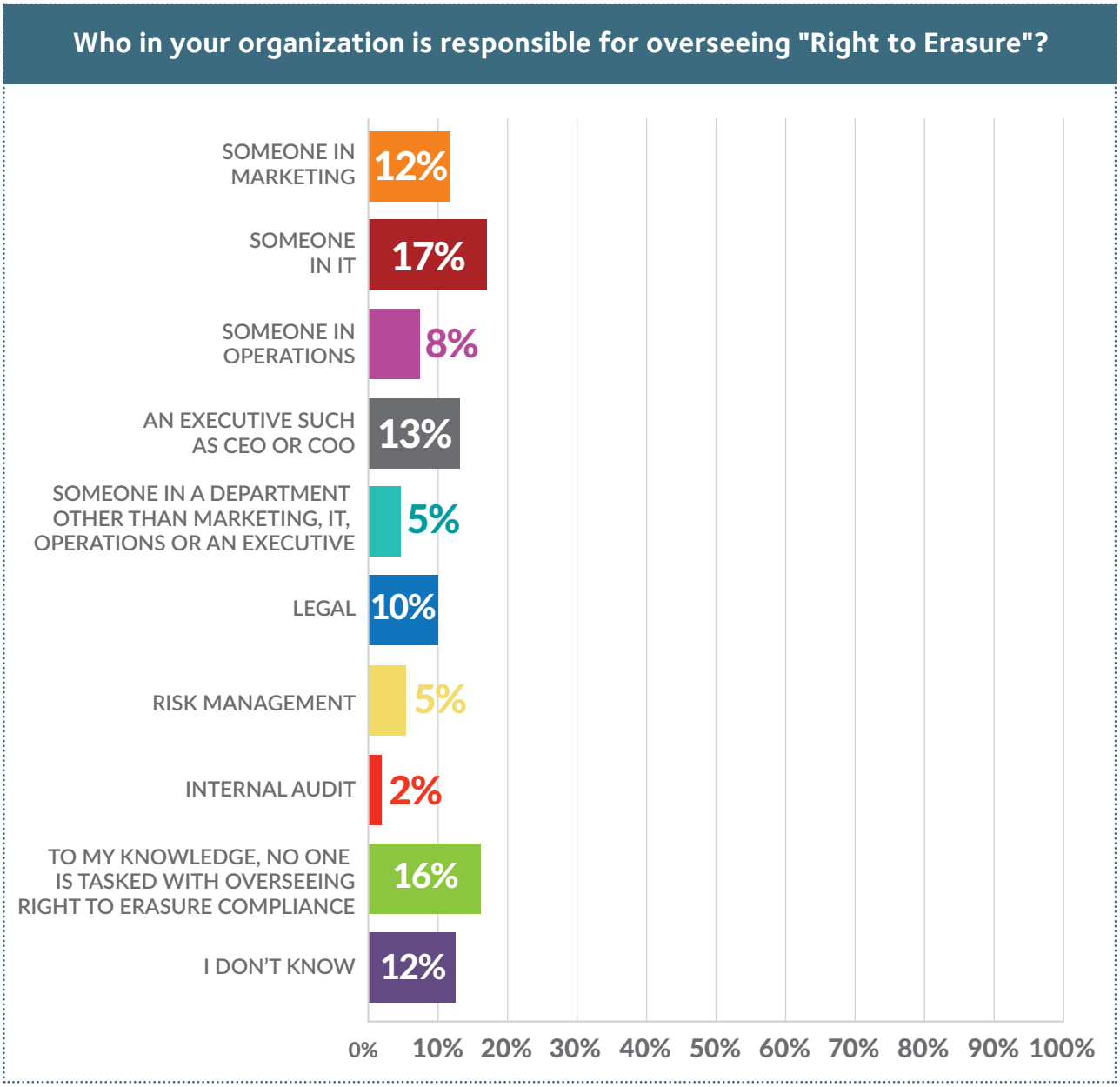
While the risks of GDPR non-compliance are great, and the knowledge gap is worrying, the most startling observation in our research was just how little U.S. marketers know about their own data and obstacles to GDPR compliance.

In order to close that gap, we recommend all U.S. marketers take the following steps:

① Empower Someone to Oversee GDPR Compliance

GDPR requires many organizations to designate a Data Protection Officer (DPO) to oversee GDPR compliance. However, real-world responsibility for executing GDPR's complex business process changes varies wildly among our respondents.

So, 28% of companies either don't know who's responsible, or think no one's responsible. Beyond that, IT is the most common answer at 17%. Then, in 13% of companies, it rolls up to an executive. In 12%, it's someone in marketing. In 10%, it's on legal.



Security is one of GDPR's most high profile and easily understood requirements. But security is just the tip of the compliance iceberg, with the risk of Single Customer View errors causing Right to Erasure failures to be missed by most organizations. In other words, this critical "iceberg lookout" seat is empty for most organization's GDPR compliance teams.

② Conduct a GDPR Right to Erasure Risk Audit

You don't know what you don't know. And as we've seen in the survey results thus far, many U.S. companies are overlooking the tremendous compliance risk posed by their current Single Customer View errors.

Organizations employ entire Governance, Risk & Compliance (GRC) teams to monitor and alert these kinds of risks. These are the ideal professionals to warn about the empty lookout seat for the GDPR risk of Single Customer View errors. Their first action will likely be to organize an audit of these errors in each SCV platform to quantify each one's degree of risk to determine if the risk is on the order of thousands of records - or millions?

Although SCV platform vendors provide their own match accuracy audit tools, those technologies are usually limited to only analyzing small samples to attempt to estimate match error rates. This approach is insufficient and will fail to produce reliable risk metrics and Key Performance Indicators (KPIs) for GDPR that GRC professionals will demand. Most organizations will need new match audit tools and expertise capable of analyzing entire SCV platforms to deliver these results.

③ Audit Your Current Single Customer View Platform(s)

Past success of legacy SCV platforms for their original requirements are no guarantee of successful use for GDPR's broader, more loose record match requirements. If, as reported in the Pega research discussed earlier, 84% of E.U. residents ask for some kind of access or limitation to the use of their data. Companies must reliably be able to find ALL of that citizen's records.

U.S. companies that have significant E.U. resident exposure — which is most U.S. corporations today — must create the capability to find all the versions of any E.U. resident's record quickly and thoroughly. Anything less than that capability is a ticking GDPR time bomb waiting to go off.

COMPLETE TEXT OF GDPR ARTICLE 17: "THE RIGHT TO BE FORGOTTEN"

① The data subject shall have the right to obtain from the controller the erasure of personal data concerning him or her without undue delay and the controller shall have the obligation to erase personal data without undue delay where one of the following grounds applies:

1. the personal data are no longer necessary in relation to the purposes for which they were collected or otherwise processed;
2. the data subject withdraws consent on which the processing is based according to point (a) of Article 6(1), or point (a) of Article 9(2), and where there is no other legal ground for the processing;
3. the data subject objects to the processing pursuant to Article 21(1) and there are no overriding legitimate grounds for the processing, or the data subject objects to the processing pursuant to Article 21(2);
4. the personal data have been unlawfully processed;
5. the personal data have to be erased for compliance with a legal obligation in Union or Member State law to which the controller is subject;
6. the personal data have been collected in relation to the offer of information society services referred to in Article 8(1).

② Where the controller has made the personal data public and is obliged pursuant to paragraph 1 to erase the personal data, the controller, taking account of available technology and the cost of implementation, shall take reasonable steps, including technical measures, to inform controllers which are processing the personal data that the data subject has requested the erasure by such controllers of any links to, or copy or replication of, those personal data.

③ Paragraphs 1 and 2 shall not apply to the extent that processing is necessary:

1. for exercising the right of freedom of expression and information;
2. for compliance with a legal obligation which requires processing by Union or Member State law to which the controller is subject or for the performance of a task carried out in the public interest or in the exercise of official authority vested in the controller;
3. for reasons of public interest in the area of public health in accordance with points (h) and (i) of Article 9(2) as well as Article 9(3);
4. for archiving purposes in the public interest, scientific or historical research purposes or statistical purposes in accordance with Article 89(1) in so far as the right referred to in paragraph 1 is likely to render impossible or seriously impair the achievement of the objectives of that processing; or
5. for the establishment, exercise or defense of legal claims.

GDPR Moves the Match Goalposts

By Ed Allburn

PAST SCV SUCCESS CREATES GDPR FALSE SENSE OF SECURITY

Surveys show that the greatest compliance challenge of pending General Data Protection Regulation is Article-17: Right to Erasure.

The first step for compliance is to locate ALL of the source records for the customer, regardless of nicknames, abbreviations, spelling variations, typos and data quality issues. Many organizations are overly confident in their ability to accomplish this because of past, often massive investments in creating a "single customer view" (SCV) which, in theory, has already identified and linked all the related records for each customer.

With GDPR's eye-watering fines, that overconfidence will be an expensive mistake.

BALANCING FALSE-POSITIVE AND FALSE-NEGATIVE MATCH ERRORS

Configuring fuzzy match algorithms of these platforms basically determines the balance point between false-negative errors (incorrectly not matching records) versus false-positives (incorrectly matching records of different people).

Identity data governance is the process of business users and data stewards defining match success criteria, driven by assessment of the business impact of various categories of match errors to align match results with SCV business-use goals. The technical team then executes various match fine-tuning test iterations to optimize the technical configuration of the match engine.

TRADITIONAL MATCH REQUIREMENTS MAXIMIZE FALSE-NEGATIVES

But all traditional SCV systems share a common problem for GDPR compliance—original fuzzy match business requirements are heavily skewed on the side of false-negatives to minimize the risk of any false-positive errors.

EACH FALSE-NEGATIVE IS A GDPR COMPLIANCE RISK

Before GDPR, false-negative match errors could be dismissed as only being minor mistakes that had minimal negative business impact, such as a customer or prospect receiving duplicate marketing messages or analysis being slightly skewed in a statistically irrelevant way.

But GDPR turns that traditional equation on its head. Steve Eckersley, head of enforcement at the Information Commissioner's Office (ICO), succinctly articulated, "What people may think is a minor mistake could lead to the loss of their job, a day in court and a fine."

QUANTIFYING GDPR RIGHT TO ERASURE RISK METRICS

The question is not whether these GDPR platforms have false-negatives, but rather how many. Rough Order of

Magnitude (ROM) metrics help quantify the risk as being just thousands of records or possibly millions—each one a potential GDPR compliance violation.

Those risk metrics are vital not only to alert executive management, but also to make practical GDPR resource allocation decisions based on ranking and prioritizing the level of risk in these systems.

Good news—you have a number of colleagues that can help, specifically in the field of Governance, Risk, and Compliance (GRC), with titles such as Chief Privacy Officer, Chief Internal Auditor, Chief Compliance Officer, Chief Counsel and Data Protection Officer (a new position required by GDPR for large organizations). These people are empowered with the authority and budgets to elevate your GDPR risk analysis to the appropriate level.

MEASURING AND TRACKING FALSE-NEGATIVES IS KEY

The GRC professionals will want to review historical metrics such as how many false-negatives are identified month-to-month, how quickly they are remediated, the severity of the business impact and more. But for most organizations this information is not only unavailable, it is not even being formally monitored in any comprehensive manner.

False-negatives represent a major GDPR-risk blind spot. So it is key to establish comprehensive false-negative reporting and tracking.

SIMPLE TEST: SCV PLATFORM MATCH CONFLICTS

A fast, simple test: Review total customer counts reported by your SCV platforms. Those numbers often differ substantially and can hide surprisingly extensive match conflicts, especially for wealth management and other VIP customer segments which have more records and higher data quality complexity. For example, during a Fortune 100 MDM project, DataDelta's technology determined that a 2% total customer count difference was found to be the net result of match conflicts impacting more than 25% of customer source records.

SOLUTION: GDPR MOVES THE MATCH GOALPOSTS

SCV professionals know that simply loosening fuzzy match configurations would cause match results to snowball into useless piles of false-positives. So rigorous fine-tuning iterations must be done like before, but with the goal of erring on the side of false-positives.

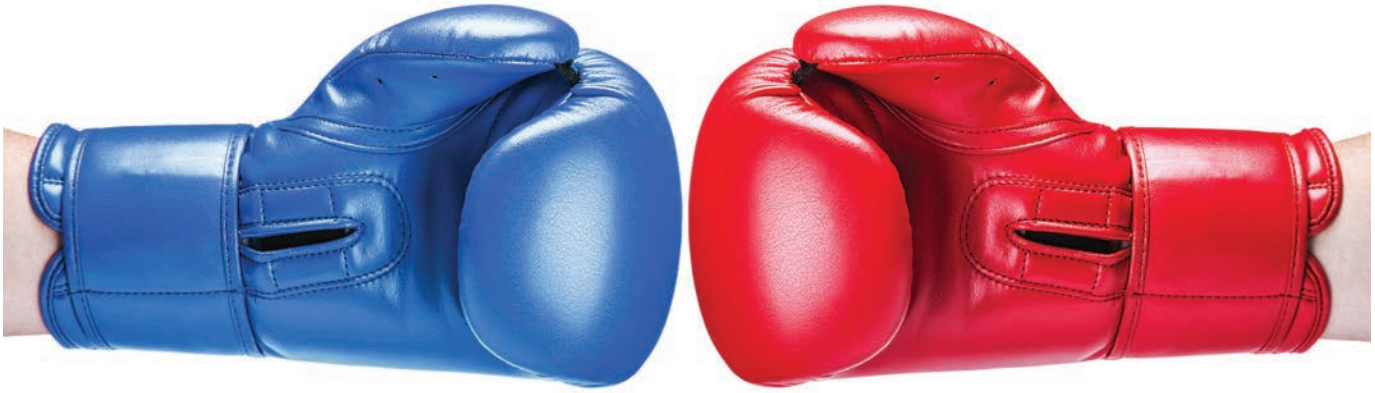
The solution may also require augmenting your current SCV technology with more modern, EU-specific data quality enhancements. For example, simply plugging in more sophisticated EU-specific address cleansing and standardization can have a surprisingly significant improvement on the match results.

Data Integration: The Tale of the Tape

By Joseph Vertido

Over time, the term Data Integration (DI) in today's industry has become quite commonplace. The use of DI Platforms in one's organization has become standard and even a necessity when it comes to managing different database systems. Selecting the perfect-fit Data Integration Platform is synonymous to a programmer trying to pick which language to use for his next big project. In other words, there exists a multitude of factors to consider, each with its own set of advantages.

Three common DI Platforms we commonly encounter when working with clients are SQL Server® Integration Services (SSIS), Pentaho® Data Integration and Talend® Enterprise. These three big name DI Platforms offer an array of extensive functionalities, many of which overlap. In selecting the best fit solution for Data Integration, understanding the advantages of each allows for a more informed choice. Let's take a closer look into these three big name DI Platforms and how each has made a name for itself.



Microsoft® SQL Server® Integration Services

Probably the most common and best-known platform used by many DBAs in the industry is SQL Server Integration Services. Used by both small and enterprise level businesses, Microsoft has garnered many users over the years for Integration Services, dating all the way back to the year 2000. Since there were already many users of SQL Server, shipping Integration Services with the product made sense. And in the SQL Server releases for 2005 and 2008, Microsoft SSIS was at full throttle. As one of the pioneers in the popularization of Data Integration, SSIS offers many capabilities.

STRENGTHS

- Tight integration with other Microsoft Products, offering easy integration to newer technologies like Microsoft Data Lake
- Stability and maturity
- Support for third party integrations
- Massive community support
- Ease and speed of implementation
- Low cost
- Parallel processing

Most Data Integration tools will have many overlapping capabilities, which are quite standard. Functionalities such as an extensive data connector, cleansing transformations, custom scripting, scheduling, profiling, matching and merging, conditional operators, error handling and so on. And this is true for Pentaho, Talend and SSIS.

One major advantage of both Pentaho and Talend are the community edition versions of their tools and open source nature. Both also offer support for windows and Linux operating systems, whereas Microsoft is Windows driven. Both Pentaho and Talend have also invested a lot of focus on Big Data and outshine SSIS in this area.

Picking the best fit Data Integration Tool to use for a business merits extensive research, understanding and testing. It is important to ensure that while current business requirements are met, future circumstances and changes to the business must be accommodated. Pentaho, Talend and SSIS have kept up with the fast-evolving industry, ensuring new technologies are incorporated in their platforms.

There are in fact several other Data Integration Platforms, each having their own advantages and disadvantages. However, we find that Pentaho, Talend and SSIS have proven to perform quite impressively over the years, and we are confident that they will continue to do so in the years to come.

pentaho

Pentaho is one of the leading data integration and business analytics companies with an enterprise-class, open source-based platform for diverse (big) data deployments. Pentaho's unified data integration and analytics platform is comprehensive, completely embeddable and delivers governed data to power any analytics in any environment.

Pentaho is unique in that they provide both data integration and analytics capabilities together, in an end-to-end platform. They work with any data, from any platform, for any type of analysis.

Here are some of its key differentiators:

BRING ANALYTICS INTO DATA PREP

Visualize Data In-Line at Every Step of the Data Pipeline, on a Single Platform

- **Easy Access to Analytics:** Robust admin features – performance monitoring, job rollback and restart, and an operations mart – simplify usage auditing.
- **Quickly Prototype and Publish:** Reduce the time needed to provide data models for business users, creating a more collaborative process between business and IT.
- **Shorten Development Time:** Use data services to virtualize transformed data, making data sets immediately available for reports and applications.

ENTERPRISE PLATFORM TO ACCELERATE THE DATA PIPELINE

Go Beyond Standard ETL to Scalable and Flexible Management for End-to-End Data Flows

- **Increase Time Efficiency:** Dynamic and reusable data integration templates enable users to create transformations on the fly.
- **Built for Data Growth:** Multi-threaded data integration engine scales up and out, including deployment to clustered and cloud environments.
- **Simplify Administration:** Robust admin features – performance monitoring, job roll-back and restart, and an operations mart – simplify usage auditing.

BROAD AND ADAPTIVE BIG DATA INTEGRATION

Deep Native Connections and an Adaptive Big Data Layer Accelerate Access

- **Access Data Once:** Gain access to data once, and then process, combine and consume it anywhere.
- **Greater Flexibility:** Enable users to reduce risk by providing insulation from changes in the big data ecosystem.
- **Works With Popular Data Stores:** Support for the latest Hadoop distributions from Cloudera, Hortonworks, MapR and Amazon Web Services.

talend

Talend provides a modern, native, open and unified data platform for all your integration needs—on premises, hybrid, in the cloud or multi cloud —that can be rolled out quickly, at a predictable cost.

Native code generation means no overhead, no need to install on each cluster and node. This brings agility in the data pipelines as data processing and data quality controls can be applied inflight, on the cloud or on-premises, real time or batch. This lightweight approach also translates into cost reduction as they don't charge by data volume, CPU or node. Unlike many of its competitors, Talend only charges per developer.

Talend is a leader in the Gartner Data Integration Tools and in the Gartner Data Quality Tool magic quadrants, it made the most positive move in the quadrant, while all the incumbents are falling back under the weight of their legacy platform (the "legacy trap").

Additionally, many vendors claim to offer an integrated platform, when in reality they deliver a bunch of loosely coupled point solutions that force customers to piece siloed products together if they want a truly enterprise-class solution for real-time decision making and trusted data. We are in an increasingly data-driven world where winners and losers are being decided based on how well they can leverage enterprise information.

How does Talend's platform compare versus competitors?

Talend	Alternative Solutions
Comprehensive & unified	Poorly integrated point solutions, with overlapping features
Open source, portable, community driven	Proprietary, vendor lock-in
Natively exploits Cloud and Big Data	Not optimized for Cloud or Big Data
Modern & lightweight	Complex & hard to install
Integrated data quality	Nickel & diming for data quality features
No data tax & Lower TCO	Expensive

Out of all the solutions we've seen Talend offers the largest array of components in their platform, offering an extensive array of GUI driven functionalities for performing different kinds of data transformations. They offer more than 30 different components under their Data Quality Section alone, making it one of the better tools for having the most out-of-the-box functionalities.

CASE STUDY

Z1 MOTORSPORTS

Melissa Dramatically Reduces Fraudulent E-Commerce Transactions for Online Automotive Retailer by 90%

By Christopher Hosford

It's no secret that e-commerce has transformed global retailing, but the extent of that growth is still eye-opening. According to Forrester Research, U.S. online sales will grow to $523 billion by 2020, representing an annual growth rate of 9.3%.

But along with that growth comes a downside: fraudulent e-commerce transactions, sometimes via stolen credit cards, other times through fraudulent chargebacks when a fraudster takes delivery of a product and then promptly denies payment through his credit card provider.

According to research firm Aberdeen Group, online fraud combined with the tedious time spent double checking orders for legitimacy cost e-retailers between 45% and 60% of their overall profitability. The real dollar cost is expected to reach $6.8 billion in 2018 alone.

It's a problem that Z1 Motorsports in Atlanta has experienced first-hand. Z1 supplies high-performance automotive parts to do-it-yourselfers and enthusiasts of Nissan and Infiniti sports models worldwide. Most buyers are legitimate, but the company nevertheless has had to work hard to ship parts only to legitimate customers while warding off orders from the fraudsters as quickly as possible.

STEMMING THE LOSS

Z1 had received about $250,000 in annual chargebacks, even as the sales staff was spending a hefty seven-and-a-half minutes per order sifting the good orders from the bad, taking time away from productive sales work.

"When we'd received an order, we tried to make sure every customer was legit," says Alistair Cruickshank, director of IT at Z1. "We'd first look to see if the billing and shipping address were the same, or if there was a request for express shipping, indicating possible quick chargebacks as soon as they received the parts."

> The most important contribution Melissa has made is in our knowing who our customers really are. Being able to verify names, addresses and more enables us, at last, to say yes or no to any order. Because of that, I've recommended Melissa to several other companies. It saves you time and money.
>
> **Alistair Cruickshank,** *Director of IT*, **Z1**

Cruickshank adds that while the chargeback process is time and labor intensive, it usually doesn't rule in favor of the merchant. That's why his rule of thumb is that if the product doesn't leave the building, the loss is minimal. Cruickshank says the key to controlling losses is to have the right information to make the decision to ship or not ship.

Company staff also checked IP addresses against known fraudulent users, and even scanned Facebook and other online pages to verify suspicious customers. But the company was still suffering from its share of e-commerce fraud.

Enter Melissa, a leading provider of global contact data quality and identity verification solutions.

Fed up with the status quo, Cruickshank chose to implement Melissa's Personator Web Service, an all-in-one contact checking, verification, move update, and appending solution. Personator parses names, addresses, phone numbers, email addresses, and much more in providing the ultimate in customer verification.

"Years before I had actually used Melissa services for college research," Cruickshank said. "At Z1, I decided to see what other services they offer. I found out that the cost was so nominal there was no way not to consider using them."

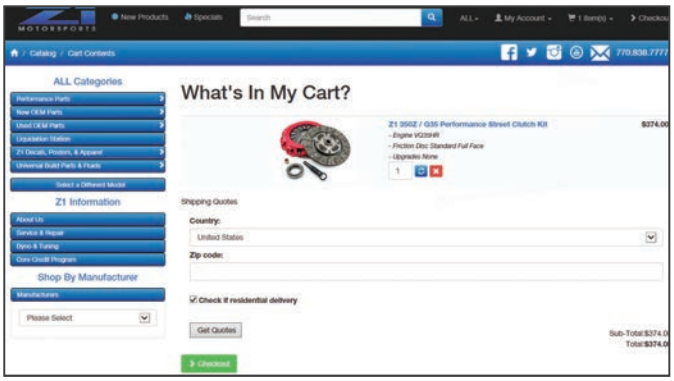
Cruickshank also opted for Melissa's U.S. Property Data service, which provides accurate real estate and property data on more than 140 million U.S. properties. The service nails down building information, property owner identification, owner mail address and more, all critical when connecting customer names with legitimate billing and shipping addresses.

A FULL-FEATURED APPROACH

Z1's first step with any order is to use Personator to make sure a customer and his address are a valid match, and if the billing and shipping addresses, if different, are both valid.

"Then, we pull property information, including billing and shipping addresses," Cruickshank said. "If there are red flags there, we get them on the phone and verify their legitimacy based on what we already know through Melissa's solutions."

The payoff has been dramatic. Z1 began using Melissa in 2017, running about $1.5 million worth of suspicious orders through its verification tools. After just one year, $250,000 in annual chargebacks were reduced to $22,000. The company also has greatly improved its chargeback challenges with credit card companies because of its now-rigorous customer verification procedures.



Meanwhile, the labor cost of manually verifying customers has been dramatically reduced, from 7.5 minutes per flagged account to a mere 1.5 minutes on average.

In tandem, Melissa's Personator and U.S. Property Data offer an unparalleled approach to e-commerce customer verification, Cruickshank said.

"The most important contribution Melissa has made is in our knowing who our customers really are," he said. "Being able to verify names, addresses and more enables us, at last, to say yes or no to any order. Because of that, I've recommended Melissa to several other companies. It saves you time and money."

Melissa Personator® Suite

Personator® from Melissa not only enables companies to obtain and preserve a holistic single customer view, it also serves as an identity resolution and verification engine with a wide array of applications across industries, all enhanced with seamless global intelligence.

Using Personator effectively brings numerous secondary benefits past curating customer information, like enhancing customer service interactions and offering a targeted marketing strategy over the carpeted approaches of the past. Personator also helps strictly controlled industries avoid reputational risk with regulators and the general public, while relieving the pain of regulatory compliance intended to curb money laundering and fraud, for example.

THE DIGITAL PERSONAL TOUCH

By tapping into a global reference dataset of billions of active and historical records, Personator enables a 360-degree view of the customer in real-time, ensuring an excellent customer service experience. Full contact data validation confirms that name matches address, phone number and email, and that each element is valid and contactable, plus adds location intelligence to customer records for a comprehensive view of that individual.

The ability to check, verify, append, move update and implement demographics for sales and marketing teams, provides accurate and trustworthy leads that are easily maintainable within CRM databases and ensures that contact information of prospects stays fresh and reliable. Personator blends all of the requirements of a seamless, real-time engine that drives confidence in customer relationships, enhances marketing efforts and eases security concerns.

PERSONAL SECURITY

If the inspiration to reap the benefits of absolutely knowing your customer isn't convincing enough, consider the fact that 74% of companies were targets of online payment fraud in 2016, up from 60% just three years prior. With the trend in online commerce skyrocketing and the increasing chances of

74%
of companies were targets of online payment fraud in 2016, up from 60% just three years prior

165%
increase in mobile-related ID theft since 2013

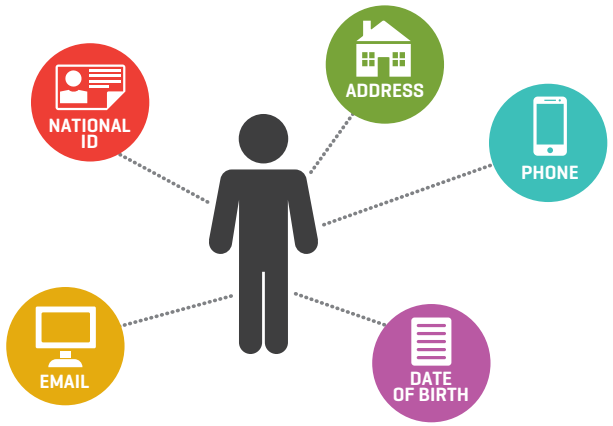
$147 BILLION
abandonment due to checkout friction

Go to our website for a free trial.

you being a victim greater than not, on-demand customer certainty is essential to mitigate risk while still delivering on customer expectations of convenience, speed and simplicity.

Even a real-time verification of address alone can shave the margin of exposure down by determining if a provided address is really theirs, and not a work address, or parental address offered by a dependent with a stolen credit card. Enterprises can decide instantly whether to accept new customers, detect fraudulent applications and activity in customer channels, and capture verified and standardized customer data at every customer touchpoint to augment or affirm exactly who that person is.

Personator guards against fraud and money laundering by verifying age and national IDs such as social security numbers and driver's licenses, or checking for federal and international sanctions. This product not only assists in increasing business revenue, it helps mitigate the factors that can affect the bottom line like lost time and effort, deception or theft.



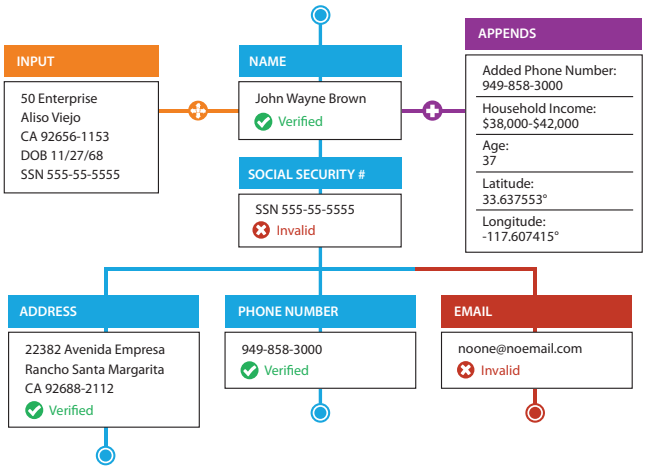
Personator verifies each element of contact data, including social security number (SSN), address, phone, email, date of birth - so you know your customer is truly who they say they are.

PERSONALIZED E-COMMERCE

Chargeback fraud grew by 96% last year, and card-not-present fraud has now outpaced e-commerce growth. Vendors must quickly scale anti-fraud capabilities while preserving the buyer experience. Personator's multiple layers of identity attributes assist with:

- **Address-to-name matching**
- **Centricity of identity attributes –** phone, name, address, email, etc.
- **Location attributes –** IP verification and lat/long location for billing & shipping

By maintaining clean verifiable contact data from every customer touchpoint for a consistent customer experience, Personator's 360-degree customer view serves double duty for omnichannel retailers by mitigating multiple types of fraud and shopping cart abandonment, a win-win for both retailer and customer.



Personator will verify, correct and standardize each element of contact data for the most accurate, complete view of your customer.

KEY FEATURES

IDENTITY VERIFICATION

Know who you are doing business with to avoid doing business with risky customers, prevent fraud and maintain compliance.

WATCH LIST & PEP SCREENING

Confidently comply with AML regulations with access to rich entity profiles on lists such as OFAC, PEP, UN and many more.

CONTACT DATA VALIDATION

Verify address, name, phone and email at point of entry or in batch, to validate and ensure data accuracy.

DATA APPEND

Complete contact records by adding missing email, address and phone data for enhanced customer intelligence.

DATA ENRICHMENT

Add precise latitude/longitude coordinates and demographic data for greater insights and better multichannel marketing.

PLUGINS & API INTEGRATION

Plugins and RESTful Web services make it easy to integrate Personator verification into your current and future systems.

The Road Forward

By Christopher Jones

Real-Time Email Verification

EMAIL LIST RX: PREVENTIVE CARE

The best, most cost-effective way to maintain contact with customers is by capturing a valid email. People move and change jobs throughout their lifetime, but rarely change their email address. A valid email is useful for maintaining newsletters and executing order confirmations, and having a valid email address is a great way to improve deduplication efforts – because it's the least likely piece of contact info to change. So email verification is crucial, and ideally you would secure your list from bad contact saturation before it became infected.

Melissa's Real-Time Email Verification API does exactly that: validates a contact in real-time as it's created. The second someone enters their contact information, it checks the validity of that email to prevent bogging down your customer list with erroneous entries.

WHY YOU NEED IT

Companies that provide free email services like Google routinely flag IP accounts of MX servers that send to faulty or bad email addresses. If you send too may emails from an email account or company domain, you run the risk of having your IP blacklisted – and that's a whole new world of headaches. Quite often, graduating to this list isn't apparent until it's too late. By the time you've checked a site like https://www.senderscore.org/ to see, you may already be in damage control to remove a ban of your IP. But even if you are, that's no reason to keep digging deeper into this digital disaster. To retain domain sending ability, services like MailChimp, Constant Contact and Get Response sprouted to fill this need and preserve their own reputations on the back end.

However, the big boys won't tell you how many emails they're throwing away (because it affects billable volume) and they won't fix obvious errors or match similarities in email lists. Real-time verification corrects grammatical and typo errors in domain or addresses that would render an otherwise good email as bad. Instead of simply discarding send recipients due to one faulty character, Melissa's service intelligently matches

and makes corrections, and can determine in real-time if the email is actually live and receiving email through our cache or through a live ping.

Grandma may still have the same email address, but most people have given up their AOL accounts and are expected to change jobs, boyfriends and contact preferences in a lifetime. So once you've cleaned your list and updated missing information, keep it clean at the point of entry and protect your investment.

HOW DOES IT WORK?

The Real Time Email Verification API plugs into web services with increasingly common REST formats like JSON and XML. You may have experienced a similar feature firsthand if you've ever felt uncertain about sharing your personal email on a web form, and entered in a false one instead. Our API does a real-time SMTP ping to mailbox providers in order to see if the emails are active or not, so the form field can respond immediately that an email address is invalid seconds after you've entered it. Now you can engage customers in this manner as well - but better.

THE UPSHOT

Say you're a hospital or insurance company. It's a little tacky to call the number the second someone reports it over the phone or fills out the form while in the ER, but having another verified point of contact in the form of email is an increasingly preferred mode of business communication and an added layer of security. According to the Radicati Group, there are currently 3.7 billion email users in the world and this number is expected to increase at a steady 3% over the next four years. An email contact helps with identity fraud, and helps ensure collection of payment.

If the ER accepts a pre-paid mobile number and enters radbikr79@gmaul.com you may never find 'Evel Knievel' again. With Real-Time Email Verification, the email would come back instantly incorrect or Melissa's data service would autocorrect for a valid Gmail account. The tool has built in flexibility for implementation, so result codes on queries can be easily coded to fit a wide array of situations and use.

For a free trial, go to: www.melissa.com/mm-email

Property Webservice v4

AUTHORITATIVE INFORMATION

While the Property Webservice v3 API returned a respectable 140 property characteristics per query on a parcel of land, the number of information fields has increased exponentially in v4 and now returns more than 400 fields. That is not a typo. Melissa's experience working with property data enables recommendations and suggestions to generate multiple types of property reports, so we're offering what we know you want and need.

In addition, v4 adds the ability to lookup property deed information and history, plus match homes by owner. Now, a single contact entry will supply comprehensive information on the property queried in addition to the owner and all other properties that owner has ever owned. It's a self-propagating return that cascades information across people and deeds as far back as records are available.

Another significant addition is the support of the Melissa Address Key (MAK), a unique 10-digit number which allows users to easily lookup property information. MAK provides unparalleled detail and accuracy on every deliverable U.S. and Canadian address plus more than 2 million locations undeliverable by the U.S. Postal Service. Finally, v4 supplies land parcel shapes, which is helpful for mapping applications and Geographic Information Systems.

It's almost as if we're compensating for something.

Property information is invaluable for investors, mortgage lenders, real estate developers, insurance companies, or anyone looking to target market products and services to a specific property. Melissa provides the most comprehensive solution available to the public for sourcing nearly any information on a given property - everything from parcel shape and heuristic deed owner information to square footage, zoning and more. The addition of the MAK integration brings a new level of data accountability to the service moving forward, on top of the robust data sets already provided.

HOW DOES IT WORK?

Significant time investment has been the fuel for this monumental update to v4: It's been more than two years since the last update to the Property Webservice. Our talented developers have been hard at work engineering the new API so it plugs into web services with increasingly common REST formats like JSON and XML as opposed to the clunky, weighty SOAP implementations of yesteryear. Forward thinking has included numerous updates and answers to the most important information our customers want for the data they need.

On a weekly basis, Melissa gathers relevant market data from both supply side and demand side sources, building a 360-degree view of the marketplace. County assessors, county recorders and lending entities contribute information that includes when the property was sold, who the owner is and was, what the owner's address is, what other properties that owner has, the prices all transactions occurred at, current property values, plus property and building metrics. It includes parcel shape and is linked to a unique Melissa Address

Key (MAK) which provides a pristine record of all future transactions.

THE UPSHOT

Let's say you are a real estate investing and research company. You're good at your job, so you're seeking market intelligence and opportunities to distinguish yourself from the competition, because innovative data mining for market information enables the company to stay abreast or ahead of the industry. With a list of attractive regions to collect market information on, Property Webservice v4 enables you to learn more about your competitors and what properties they're investing in, buying and holding onto or selling off.

Direct access to deed and homeowner data enables insight to potential competitors investing in a certain market, so you'll immediately see movement and can focus on what homes other people are investing in and glean insight to why. Using homeowner information combined with the deeds lookup functionality, you can figure out all the properties a person owns, when and how much they purchased the property for and when and how much they sold the property for – an easy way to identify who is flipping homes as opposed to who is going to make that 360th payment in year 30.

All of this can be done now with the new Property v4 Webservice: http://wiki.melissadata.com/index.php?title=Property_V4

For a free trial, go to: www.melissa.com/mm-property

Business Coder & Business Search

FEATURES, FUNCTIONALITY AND THE FUTURE

Business Coder currently standardizes business names to a single entity – IBM vs International Business Machine - then appends information on that business. Having all your business records standardized helps immensely with intelligent matching and deduping. Search for a business using the phone number, stock ticker or web address, and Business Coder will supply business firmographics like sales volumes, employee sizes, phone numbers, Standard Industrial Classification (SIC) and North American Industry Classification System (NAICS) code information as well.

Employee contacts associated with the business are discoverable in addition, making this tool incredibly useful for optimizing business to business communications, marketing and sales efforts. Right now, it's offered in the U.S. and Great Britain, and will soon will be available in Canada. What's even more exciting is a convergence of technologies with the implementation of the Melissa Address Key (MAK). For the United States and Great Britain, Business Coder takes full advantage of the MAK to offer enhanced information on a business. For more info on the Melissa Address Key, please turn to page 8.

THE FUTURE

Melissa continually strives to meet the needs of our customers and turns valuable feedback into new tools, services and products to meet those demands. Based on our feedback, we're tipping our hat to a new product in development called Business Search. The vision for Business Search is for it to function for business listings in much the same way that Personator provides a 360-degree view of contacts. Business Search will empower discovery of companies with the same name in a given region, plus increased flexibility and functionality.

It is built for batch processes and back end integration to meet the various implementations our customers need. While at this early stage of development we can't promise exact dates or specific functionality, the existing success and reception of Personator promises that Business Search will supply access to critical business intelligence that can be utilized for enhanced decision making.

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