

# SHAZZLEMAIL, PRIVATE AND SECURE EMAIL APPLICATION: PRIVACY AND THE RISKS ASSOCIATED WITH METADATA

ShazzleMail: October, 2013

*For consumers and  
businesses*

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## Metadata Defined

Metadata is commonly referred to as ‘data about data.’ For an email, metadata would include the identities of the sender and receiver, the send and receive date and time, cc or bcc recipients, and a subject line if included. For a cell phone call, metadata would include numbers dialed, length of the call, date, time and geolocation of both parties.

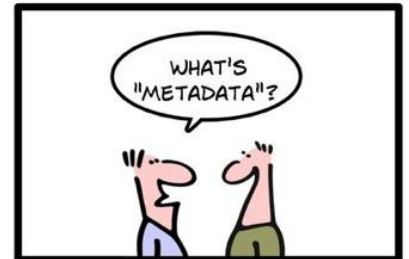
Why is it important? When collected, this data can be analyzed for patterns and trends. Thomas Drake wrote in The Guardian, “The problem is that in the digital space, metadata becomes the index for content. And content is gold for determining intent.”<sup>1</sup>

A recent New York Times editorial had this to say about what metadata can reveal, “...intimate details about a person’s lifestyle and beliefs – political leanings and associations, medical issues, sexual orientation, habits of religious worship and even marital infidelities.”<sup>2</sup> With metadata, your actions in the digital world become an open book. Check with former CIA director, David Petraeus. The metadata from emails to his mistress were enough to reveal their secret relationship and for Petraeus to lose his job<sup>3</sup>.

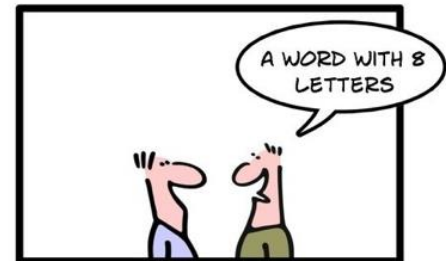
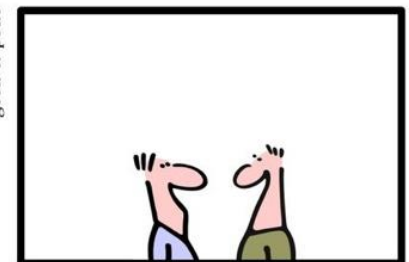
Finally, *Nature’s Scientific Reports* published a paper last year discussing how Massachusetts Institute of Technology researchers found they could easily identify a person with four phone calls using cell phone call metadata from 1.5 million anonymous people<sup>4</sup>. And as Joshua Keating from Foreign Policy explained, “they didn’t need names, addresses or phone numbers. They only used time of the call and the closet cell tower.”<sup>5</sup>

Metadata is highly sensitive information and should be private.

### SIMPLY EXPLAINED: METADATA



geek & poke



## ShazzleMail Email Application and Metadata

Virtually all email, including secure email, travels a client/server route. Standard secure mail is made secure through encryption – the message content is encrypted so that a receiver needs a key to open it. But the metadata used to send the email is not encrypted. Instead it must be received on a central server complete with information of the sender, receiver, time of transmission, and other information on the record. The concentration of this information at a central point makes it simple for the metadata to be served up to the NSA or others who can discern, through this comprehensive record of sending patterns, enough detail to destroy any notion of privacy. In fact, as far back as 1968, Paul Armer of the RAND Corporation, in front of a U.S. Senate subcommittee, testified about his concerns for privacy in the future stating, “The payoff to successful snooping is much greater when all the facts are stored in one place.”<sup>6</sup> Since it is not possible to engineer client/server web mail to avoid this centralized point of collection, Lavabit and Silent Circle shut down their secure email services.



ShazzleMail is different. ShazzleMail does not send through a central server, but from the sender’s own device (smartphone or other). Thus, the system employs as many mail servers as there are users. Also, the messages are sent encrypted through randomly selected relays, further obfuscating any sending patterns. Even if snippets of metadata were collected by the NSA or others from these diffuse sources, they would not be able to establish any patterns or information from the random message flow. In short, ShazzleMail’s patent pending architecture means that email for the first time ever can be secure and private.

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Thank you for reading this document. For further information about ShazzleMail or to get started with your own ShazzleMail account, visit our website at [www.shazzlemail.com](http://www.shazzlemail.com) or call us at (602) 638-5839. You can also find us on Facebook, search ShazzleMail.

## Appendix

### Footnotes

- (1) Drake, Thomas. "Snowden saw what I saw: surveillance criminally subverting the constitution. The Guardian. 12 Jun. 2013. 04 Oct. 2013.
- (2) The Editorial Board, Surveillance: A Threat to Democracy. New York Times. 11 Jun. 2013. 02 Oct. 2013.
- (3) Stanley, Jay and Wizner, Ben. "Why the government wants your metadata." Reuters. 07 Jun. 2013. 2 Oct. 2013.
- (4) De Montjoye, Yves-Alexandre, Hidalgo, Cesar A., Verleysen, Michel, Blondel, Vincent D. "Unique in the Crowd: The privacy bounds of human mobility." Nature, Scientific Reports. 25 Mar. 2013. 02 Oct. 2013.
- (5) Reeve, Elspeth. "Why Your Metadata Is Your Every Move." Atlantic Wire. 12 Jun. 2013. 02 Oct. 2013.
- (6) Novak, Matt. "The Privacy Dangers of a Cashless Society Were Clear Over 40 years Ago. Paleofuture. 11 Jun. 2013. 30 Sept. 2013.

