



Messaging Anti-Abuse Working Group (MAAWG)

Email Metrics Program: The Network Operators' Perspective

Report #6 - Second Quarter 2007
(Issued October 2007)

Executive Summary

This sixth report incorporates new data for the second quarter of 2007, incorporating aggregated metrics from April through June. Beginning with this report, the Messaging Anti-Abuse Working Group has slightly modified the format of our findings to improve the readability and usefulness of this information. These changes are consistent with our goal of supplying a unique set of metrics provided directly by our service provider members. The format modifications do not alter the quality of the data but do offer a more efficient and reliable method of reporting the results.

The MAAWG metrics program has accumulated over eighteen months of chronological data, generally with consistent results. Based on our experience in producing this report, we have found that both the number of mailboxes covered and the specific network operators that contribute to the report change, sometimes from quarter to quarter. Consequently, going forward, we will only show the data as percentages and from the last twelve months in each new report. Selected data from the earlier quarters will be represented in a new graph. For anyone interested in the long-term history, previously published reports with the original data will remain available on the MAAWG Web site.

The metrics data continues to be provided voluntarily and confidentially by Internet service providers, network operators and email providers that have come together in MAAWG to work against online abuse. MAAWG members are under no obligation to supply this information or participate in the metrics reporting program. The data is shared at the discretion of each company and is reported here as aggregated metrics to support the industry's efforts in preventing abuse from reaching individual user mailboxes.

We are committed to continuing the important work of the MAAWG Email Metrics Program. The quarterly reports issued through MAAWG have become a vital industry source for discerning the extent of abusive emails and for responding to fraudulent and damaging online activity.

Report #6 – 2nd Quarter 2007 Results

The statistics reported below are compiled from confidential data provided by participating MAAWG member service operators for Q2 2007. Previous reports have been adjusted as necessary to provide relatively comparative data. The new metrics indicate a slight drop in the number of unaltered emails delivered compared to the previous quarter, indicating a slight rise in the rate of abusive email during April through June of this year.



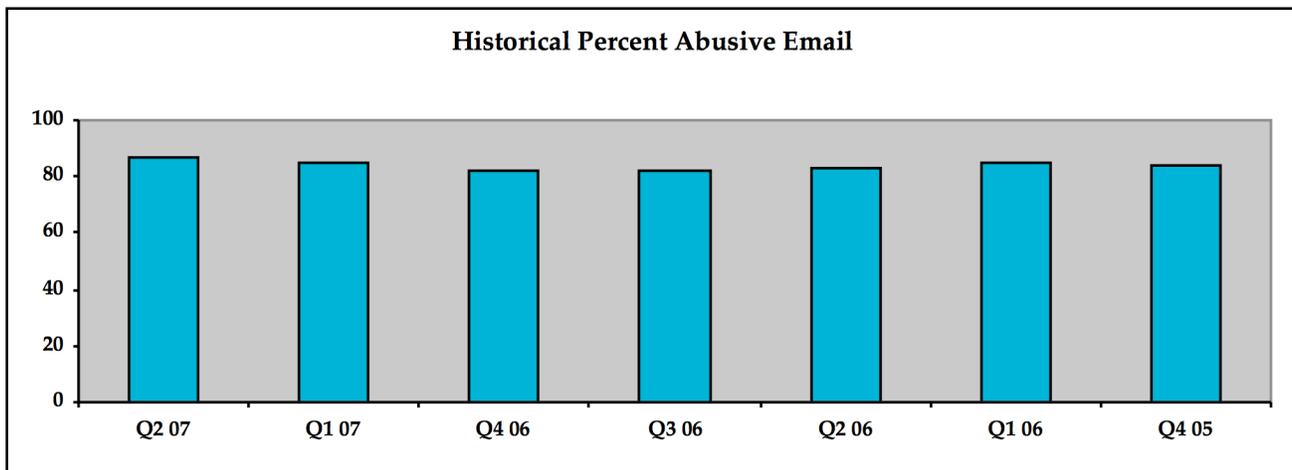
Selected Ratios	Report #6 Q2 2007	Report #5 Q1 2007	Report #4 Q4 2006	Report #4 Q3 2006
Dropped Connections & Blocked/Tagged Inbound Emails per Mailbox	1230	1178	1221	1210
Dropped Connections & Blocked/Tagged Inbound Emails per Unaltered Delivered Email	6.50 or 86.7% abusive email	5.77 or 85.2% abusive email	4.58 or 82.1% abusive email	4.82 or 81.8% abusive email
Number of Unaltered Delivered Email per Mailbox	189	204	267	268

At this point, MAAWG does not issue a period report if there are less than 100 million mailboxes covered in the collected data. This second quarter 2007 report covers more than 240 million mailboxes, with 296 billion dropped connections or blocked / tagged inbound emails, and 46 billion unaltered delivered email. Given changes in the volume of our voluntary reporting, the historical data shown here has been adjusted for comparative purposes. All of the original reports are available at www.MAAWG.org.

Observations

It is important to understand that the metrics in the MAAWG report do not represent spam, but report the volume of email identified as "abusive." This distinction is significant because the definition of spam can vary greatly from country to country and as used in local legislation.

The percentage of email identified as abusive has been oscillating between 82% and 87%, and the same can be said for the number of unaltered delivered email per mailbox, in roughly an inverse manner. The fluctuation in the metrics, therefore, may be the result of service providers dealing with new schemes introduced by abusers to escape service providers' detection methods, including the use of filters to keep abusive email from reaching users' inboxes.



The metrics continue to reflect the continuing high level of abusive email the industry works to prevent from clogging users' inboxes and the need for continued industry cooperation and diligence.

What is Measured?

- **Number of Mailboxes Represented** - This is the total current customer mailbox count at the end of the quarter. This metric is reported in million of mailboxes.

- **Number of Dropped Connections and Blocked/Tagged Inbound Emails** – Taken together, dropped connections and blocked/tagged inbound emails are a measure of "abusive emails." The Number of Dropped Connections is the total connections dropped by using RBLs (Real Time Blacklists) and other devices. The Number of Blocked or Tagged Inbound Emails is the total number of emails blocked or tagged by a provider using commonly applied devices such as ASAV (Anti-Spam / Anti-Viral) framework, MTAs (Mail Transfer Agents) and other recipient or message based rules. The sum of three months of dropped connections and blocked or tagged inbound emails is reported in billions. In this report, one dropped connection is equivalent to one blocked or tagged inbound email.
- **Number of Unaltered Delivered Emails** - This is the total number of emails that were not blocked or tagged by the network operator's anti-abuse efforts and were delivered to customers. The sum of three months of delivered emails is reported in billions.

Explanatory Notes:

- **Abusive Emails:** The one thing this report does not attempt to define is "spam." Even though a great deal of time and energy have been devoted to clarifying this term, there is no universally accepted definition. The precise definition of spam differs slightly from jurisdiction to jurisdiction in accordance with local laws. For example, in Europe and Canada, spam is based on an "opt-in" approach, whereas the United States has adopted an "opt out" approach. Nevertheless, most would agree that "spam" can be defined as electronic communications that likely are not wanted or expected by the recipient.

What is more, in working to reduce spam, the industry has become increasingly focused on the behavior of the sender instead of only looking at the form or content of a message. In this report, therefore, we measure "abusive email," which we believe to be a more accurate term. Abusive emails are communications that seek to exploit the end user.

- **False Positives:** Given the massive volumes of email that transverse the networks everyday, one of the challenges facing ISPs and network operators is how to differentiate between abusive, unwanted emails and legitimate messages sent to a large number of recipients. A "false positive" is the term generally used to describe legitimate messages that have been blocked or tagged by a spam filter or other mechanisms intended to stop abusive email. The issues that arise in the context of accurately defining and accounting for false positives are similar to those associated with defining spam. Therefore, this report does not attempt to account for any "false positives," leaving that assessment to others.
- **ISP and Network Operator Data:** As noted above, this aggregated data has been obtained exclusively from ISPs, network operators and email providers who are members of MAAWG. It does not include information generated separately by anti-abuse solution providers or vendors.
- **Minimum Number of Mailboxes:** This email metrics program is based on a minimum threshold of 100 million mailboxes, as we believe this number is statistically significant.
- **Dropped Connections:** A dropped connection occurs before the number of recipients or emails is known. It is therefore impossible to determine how many abusive emails per dropped connection were prevented from entering the network. Moreover, when a connection is prohibited, i.e. "null routed," there is no connection to count and so these are not factored in the number of reported dropped connections. As a result, a substantial volume of abusive emails are never likely to be counted. However, it is a conservative estimate to say that each dropped connection corresponds to at least one abusive email. This metric, although imprecise in and of itself, gives a sense of the magnitude of abusive emails that are not even penetrating the operator's network.

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