The Accuracy Framework

Steve Crocker, 2 November 2021

This is a first cut at a holistic view of the “Accuracy Problem.” It is far from complete and is intended to elicit response, discussion, etc.

The big picture

There are two halves to the big picture.

The first half is the collection process. Registrars collect registration data. As they do so, they may or may not take steps to ascertain the accuracy of the individual data elements. There are four levels of assurance, including the null level. The level of assurance is determined by the registrar’s policy and practice. The registrar’s policy reflects both its own preferences and conformance with higher level authorities – the registry, ICANN policy, and law.

The second half is the use of the data. Authorized requesters receive registration in response to authorized requests. The efficacy of the data depends in part on the accuracy of the data.

The focus of this memo is on the first half, the validation of the data.

The Framework

The following is a framework consisting of four parts. The top level of this framework, the statement of purpose(s), seems to be missing from the scoping process. However, it is essential to distinguish between the requirements imposed on registrars and the intended purpose of those requirements.

1. Purpose(s)

A statement of the criteria of utility, i.e., what is the information to be used for?

Examples:

* Contactability  
    
  **Question**: If the purpose is to be able to contact the registrant, what happens if the contact data is accurate but the registrant fails to respond?
* Evidence of contactability suitable for demonstrating that an effort has been made. Useful in transferring risk. “Judge, we notified the registrant the domain name is being used to infringe on our copyrighted material.”
* Other use cases?

1. Requirements

Specification of the data to be collected and what level of validation is applied to each data element.

The current dialog seems to have settled on a vocabulary of four levels: no validation, syntactic validation, operational validation, identify verification. The wording associated with the third level, operational validation, seems to need clarification. For phone numbers and email addresses, does operational validation require only that the phone rings or the email doesn’t bounce, or does it require an affirmative response. “Affirmative response” means someone responds and affirms in the response that this is the correct person.

**Question**: If the requirements are satisfied, is data fit for purpose? This is an essential question. It is not uncommon in the design and deployment of a system that it may fail to meet the needs of the users but satisfy the contractual requirements.

1. Measurement of Accuracy
2. Classification of Conformance  
     
   **Question**: A categorization, apparently in the Whois Accuracy Pilot Study Report, lists three levels of conformance between No Failure and Full Failure: Minimal Failure, Limited Failure, Substantial Failure. It is not clear how the definitions associated with these terms relate to whether the data does or does not serve the intended use(s). What is the impact re achievement of the intended purpose(s)?
3. Method measurement
4. Target Levels of Performance  
     
   **Question**: What are the target levels of conformance?

**Question**: How does the target relate to achievement of the purpose(s)?

1. Checking, Reporting and Enforcement

Description of the methods for checking, reporting inaccuracies, and enforcing both required practice and correction of errors.

**Question**: How effective are these methods in achieving the specified target levels of conformance?