



August 15, 2013

By electronic filing:

Marlene Dortch  
Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Washington, DC 20554

Re: In the Matter of Structure and Practices of the Video Relay Service Program, CG Docket No. 10-51, and Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech, CG Docket No. 03-123

Dear Ms. Dortch:

On August 13, 2013, at the request of the David Schmidt of the Office of the Managing Director, I sent the attached document to him describing the interaction of the proposed Telecommunications Relay Fund User Registration Database with the Internet-based Telecommunications Relay Service Telephone Number Directory administered by Neustar.

Please do not hesitate to contact me if you have any questions regarding this submission.

Sincerely,

A handwritten signature in dark ink, appearing to read "Richard L. Fruchterman, III". The signature is written in a cursive style and includes a large, stylized initial "R" at the end.

Richard L. Fruchterman, III  
Associate General Counsel

cc: David Schmidt  
Henning Schulzrinne  
Rich Hovey  
Gary Remondino

## **Rationale for combining the Telecommunications Relay Service (TRS) User Registration Database (user database) with the existing iTRS Telephone Numbering Directory (iTRS Directory).**

The user database will need to be queried during the setup of every iTRS call, except possibly 9-1-1 calls, to determine the caller's eligibility for using iTRS. This is similar to the Commission's requirement that the iTRS directory be queried on every out-bound call from an iTRS user to determine whether the called number is in the iTRS directory (the iTRS directory must also be queried on all in-bound "dial-around" calls). To handle these queries, the iTRS directory is architected to have near-5 nines reliability. The user database will require a similar high-availability architecture. The current hardware set supporting the iTRS directory can easily handle the user directory function with no hardware change at all. If the databases were separate, the FCC would need to contract for a second high-availability system in addition to the existing iTRS directory.

The providers need provisioning and query interfaces, credentials, and support mechanisms to deal with both the user database and the iTRS directory. Making these items identical or nearly identical lowers costs and improves reliability from the provider point of view. Having a single point of accountability when problems arise is also helpful.

Adding the user database to the existing iTRS directory would need a substantial new validation capability (which Neustar possesses). However, adding the functionality is a relatively small change to the existing code and could be handled with a change order similar to several change orders the FCC has given Neustar in the evolution of the iTRS database.

The query for valid user and for the iTRS destination route could be combined into a single query, which would accept the user identification information on the query and return the route if the user is still authorized to receive services and the telephone number record is still in the database. This would simplify the provider mechanisms.

Finally, if the databases were separate, the iTRS directory would need to be enhanced with new interfaces (summarized below). Even simple interface changes involve a complex revalidation of the entire product suite, which is still maintained in a fairly classical and proven waterfall development environment. Such changes to the iTRS directory would result in additional costs to support the new functionality described below

### **What interfaces would be needed if the user database and iTRS directory were separate?**

The iTRS directory must be synchronized with the user database, because the user database utilizes the telephone number as the key to the iTRS directory. We provide here just a few examples of where synchronization will be necessary. When the number in the user database changes (add/delete/modify), the corresponding record in the iTRS

directory needs to be changed in some manner, even if it is just disabling access to the record until the provider updates it. An interface to note changes in the telephone number element of the user database must be developed.

If a number ports out of the iTRS system, the user database must be updated in some manner. The iTRS directory has that port information and would need to provide it to the user database.

If the user changes default providers, both databases need to be updated in some way. The iTRS directory receives notice of the change via a National Portability Administration Center (NPAC) transaction. The user database may be updated before or after the NPAC record is changed. The two databases need to know if a port is underway, if for no other reason than to make sure both databases are updated eventually. The user database should inform the iTRS directory if the providers indicate a change of default providers is occurring and the iTRS directory should inform the user database of a number port within the iTRS system.

If a number is added to the iTRS directory, but no corresponding record exists in the user database, an error has occurred. The databases might be updated in either order and between the time one is updated and the corresponding change is made in the other database, the other is not valid. This needs to be handled with an interface between the two systems and a set of rules that include a timer mechanism that triggers error reporting.

There also needs to be some correlation of the reports from the two databases. It is not yet clear exactly what is needed, but, since there is a relationship between the records in the user database and the iTRS directory, there needs to be some accounting for any discrepancies, cross checking of record counts, etc. This will require some raw data from one database administrator being supplied to the other to create a correlation report.