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Alliance for Telecommunications
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July 26, 2001

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

VIA HAND DELIVERY

Magalie Roman Salas
Office of the Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Amendment to the Aggregate Report of
Carriers for 2nd Quarter 2001, CC Docket No. 94-102

Dear Ms. Salas:

On July 13, 2001, ATIS' sponsored TTY Forum filed its report of wireless service providers, handset and infrastructure manufacturers for 2nd Quarter 2001 in response to the Commission's Fourth Report and Order in the above-captioned proceeding. The TTY Forum hereby amends its report to include a written status report from Nokia. ATIS received this report following the submission of the TTY Forum Aggregate Report.

An original and four copies of this Amendment are enclosed for filing with the Commission. Please date-stamp and return the enclosed extra copy of this filing to our messenger.

Please contact me at 202/434-8830 if you have any questions regarding this matter.

Sincerely,

Toni E. Gilbert
Staff Attorney

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Enclosure

cc: Kris Monteith, Chief, Policy Division, WTB
Pam Gregory, Director, Disabilities Rights Division, CIB
Mindy Littell, Attorney Advisor, Policy Division, WTB
Chris Wallace, Vice President, Nokia Americas Standards



Standards Committee T1
Telecommunications



Carrier Liaison Committee



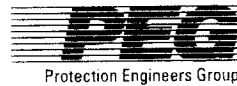
Telecommunications
Industry Forum



Network Interconnection
Interoperability Forum



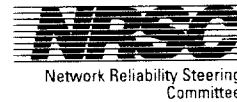
Ordering and Billing Forum



Protection Engineers Group



Standards Committee 05



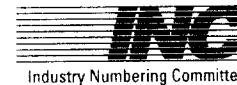
Network Reliability Steering
Committee



Network and Services
Integration Forum



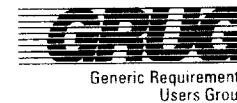
Telecommunications Fraud
Prevention Committee



Industry Numbering Committee



Internetwork Interoperability
Test Coordination Committee



Generic Requirements
Users Group



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NOKIA Americas Standards

Compiled by:

Chris Wallace

V.P. Nokia Americas Standards

July 10, 2001

Reviewed by:

NOKIA Government Affairs

Washington D.C.

Micaela Tucker

Douglas W. Neeley

Nokia Status Report to TTY Forum #18 – June 2001

Nokia manufactures mobile phones for wireless technologies; AMPS, TDMA, CDMA and GSM; at both 800 and 1900MHz. Some phones are also in developed with multiple technologies in an individual handset.

Nokia also supplies network terminals for GSM and must be concerned with the developing TTY Compatibility issue in Europe.

Nokia is continuing with FCC compliant TTY Compatibility in seven new phone programs with specific models having CDMA, TDMA, GSM and AMPS capability in various combinations.

In general, Nokia plans to meet FCC deadlines for digital TTY according to industry standards set and agreed to.

HARDWARE SOLUTIONS:

Interconnect Cable solutions (TIA/EIA TSB-121 compliant)

Nokia was the editor and author of TIA/EIA TSB-121, originally titled as:

" 2.5 mm AUDIO INTERFACE FOR MOBILE WIRELESS HANDSETS - TEXT TELEPHONES (TTY)"

In June 2001, this TSB-121 was published by Global Engineering Documents as

"Cellular Subscriber Unit Interface for TDD"

It should be noted that after sending TSB-121 to publication, several parties have requested the Nokia author/editor to re-open the issue of voltage and impedance threshold requirements.

Consumers and the TTY manufacturers must be aware that the quality of connecting cables will be crucial to the performance of this product.

Nokia continues to develop mobile handset products to support TTY/TDD Compatibility with TSB-121 three-pin headset functions. Other handset projects will have a built-in 2.5mm jack four-conductor "Stereo" connection in the handset body; with adapting interconnect cables to comply to TIA/EIA TSB-121.

MOBILE TERMINAL SOFTWARE SOLUTIONS:

CDMA IS-127-2 (as of July 2001)

Nokia CDMA Products are developed by Nokia's San Diego facility

Six to eight models are under development for TTY Compatibility.

- * After completing the implementation of the TTY feature within the mobile's memory allocation, several models have undergone TTY fully functional tests per internal test specifications.
 - Models have undergone TTY fully functional testing for EVRC at a Lucent lab test, some problems were noted and corrected.
 - Updated mobiles have been resubmitted to Lucent and Nokia expects test results in mid July 2001.
- * TTY commercial availability for Verizon, is expected beginning August 2001.

NOKIA Americas Standards

July 10, 2001

Compiled by:

Revised by:

Chris Wallace

NOKIA Government Affairs

V.P. Nokia Americas Standards

Washington D.C.

Micaela Tucker

Douglas W. Neeley

TDMA IS-136 / IS-823 (as of June 2001)

Five to seven models are being developed for TTY Compatibility.

Due to numerous wireless carrier customers' privacy requests; for public reporting purposes, Nokia may only acknowledge that Nokia is testing "a new TDMA handset" with AT&T Wireless.

General Overall Observations:

- Against tester: 3 hour TTY call with 1 character error.
- TTY character loss during SMS, call waiting, DTMF, turbo code, etc.
- With TTY support **disabled** on the handset, the TCER exceeds 18%.
Please note that this is superior to previous results.

Interoperability testing with AWS –

Testing in June produced good results - no errors in TTY transmissions.

- IOT results:

A Character loop back (echo) problem exists. This seems to be due to characters looping back somewhere. There is discussion regarding the possibility of a change to the sensitivity spec on the handset (the current -45 dBm sensitivity requirement applies to both the PSTN and the handset interface).

GSM ATIS T1.719 and T1.718, except the TTY detector

Multiple models are on schedule, including a European startup.

Nokia will support specifics of TTY - FCC E-911 Compliant TTY Support using either

All transcoder (CTM in All TCs) vs. Pooling solutions.

It is easier from an R&D perspective if Nokia supports the All transcoder solution, since there does not need to be any changes on the handset side.

* Some carriers plan to use the CTM in All transcoder solution from Nokia and Nortel and also the CTM Pooling solution from Ericsson.

* Some carriers are deploying the CTM in the All transcoder solution from Nortel and Ericsson.

* Other carriers prefer an All transcoder solution

To generalize "from a handset perspective", Nokia has to support CTM Pooling because even if the home operator is using CTM in All transcoders, the handset needs to be able to roam to networks using BSS transcoder-based CTM Pooling.

Regardless, the TTY feature is being implemented. Lab testing with infra will start when the final location(s) for the code to reside is decided.

Respectfully Submitted By:

Chris Wallace

V.P. Nokia Americas Standards

Douglas W. Neeley
Sr. Technical Standards Eng.

Leo Fitzsimon
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