Before the
Federal Communications Commission

Washington, D.C. 20554

In the Matter of

Review of the Emergency Alert System

EB Docket No. 04-296

Reply Comments of Nortel

Nortel is pleased to provide these reply comments on the extension of emergency alert capabilities to the wireless industry. Nortel commends the Commission for its reexamination of the Emergency Alert System (EAS) in light of the new technologies and capabilities that have come into existence since the inception of emergency alert requirements for over the air broadcasters.

In order to address the subject of emergency alert capabilities in the wireless environment, the Commission should consider the characteristics of an emergency alert system with the understanding that wireless is one of many possible modes for delivery of emergency alerts. The Commission should also examine what technologies are available or likely to become available that can support this service.

It is impossible to separate the service definition from the technology capability since the service is bounded by the limits of the technology. Nortel suggests that the initial focus should be on the service definition. After the service is defined, the focus should be on an evaluation of potentially enabling technologies and the availability of supporting standards.

As part of the service definition, Nortel recommends that the Commission consider who defines the content of the message; what the content of the message should be, for example, an

alert to the subscriber or a request to tune to broadcast information; whether the message should be prioritized (Federal, State and Local), and whether and how any such prioritization should be differentiated, for example, by means of the subscriber equipment; the frequency of the alerts as well as the method for conveying the content to the wireless carriers for delivery. The Commission should also address the complexities associated with emergency alert services for the disabled. The answers to these questions have definite technical and standards implications.

SMS messaging and cell broadcast are the two features currently under discussion to support emergency alert service. For CDMA, TIA 637 defines an SMS service covering point-to-point messaging and specifies the ability to broadcast a message to all mobile stations on a CDMA paging channel in a circuit switched environment. Standards for CDMA are still under consideration for packet service implementation. In contrast, GSM/UMTS separates cell broadcast service as a distinct point-to-multipoint service (as distinct from SMS). See 3GPP TS 23.041. These standards may require modification to meet a fully defined emergency alert requirement. It is important to note that no wireless technology is defined, at this time, to broadcast a voice or video message to multiple public subscribers within a particular geographic area.

SMS (point-to-point)

The delivery of an emergency alert by a point-to-point SMS implementation would place substantial demands upon network capacity at a time of likely network congestion due to the emergency situation. Such an implementation would require call set-up for every delivered message. Network resources would continue to be dedicated to delivery of the SMS until all calls had been made. Regarding the definition of emergency alert service, it would be necessary to

determine whether only SMS subscribers would receive the alert. Not all carriers currently support SMS service.

Cell Broadcast

In cell broadcast, a message is delivered within a cell, or to multiple cells, through the control or paging channel indiscriminately to all active handsets. Because no call set up takes place, the demands upon network resources are less than with a point-to-point SMS. Nortel is aware of no carrier that offers cell broadcast services in the United States.

Notwithstanding that a text delivery can be achieved through a cell broadcast or SMS capability, the conclusion does not follow that either feature constitutes an Emergency Alert Service. With Wireless Priority Service (WPS), an industry forum was convened, and it defined WPS requirements (under the direction and funding of the National Communications System (NCS)). This forum proved to be highly effective in quickly reaching agreement on a service definition. Nortel suggests that such a forum be convened with the support of federal funding to agree upon an EAS service definition. After agreement is reached, implementation consistent with wireless carrier technical capabilities should then be evaluated. Nortel believes that development funding for vendors and operational funding for carriers should be provided by the federal government.

Even with SMS and cell broadcast standards in place, the Commission should recognize that implementation of emergency alert will likely be an expensive and complex undertaking. Development of hardware and software to enable the service most likely is required. As noted,

the service definition may or may not coincide with existing standards and, if it varies, additional standards work could be required. The Commission should note that the service will need to be thoroughly tested before availability to the general public.

In view of the multiple, important unresolved technical and definitional issues described above, Nortel recommends that the Commission proceed cautiously as it considers emergency alert capabilities for the wireless industry and that a necessary first step would be to define EAS.

Respectfully submitted,

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November 29th, 2004