**IN THE UNITED STATES DISTRICT COURT**
**FOR THE EASTERN DISTRICT OF MICHIGAN**
**SOUTHERN DIVISION**

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| IN RE NEO WIRELESS, LLC | § | 2:22-MD-03034-TGB |
| PATENT LITIG. | § | |
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**DECLARATION OF WILLIAM ALBERTH IN SUPPORT OF NEO WIRELESS'S REPLY CLAIM CONSTRUCTION BRIEF**

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## I.   INTRODUCTION

1.      My name is William P. Alberth, Jr. I previously gave a declaration in this matter on

February 16, 2023, and I incorporate by reference the background, credentials, and other

preliminary matters set forth in that initial declaration.

2.      I have personal knowledge of the facts and opinions set forth in this declaration, and, if

called upon to do so, I would testify competently thereto.

3.      As before, my analysis of the materials produced in this matter is ongoing and I will

continue to review any new material as it is provided. This declaration represents only those

opinions I have formed to date. I reserve the right to amend or supplement my opinions based on

additional documents or evidence I am presented, including without limitation any arguments or

expert declarations advanced by Defendants in this case.

## II.   THE '366 PATENT

4.      With respect to the term "the ranging signal exhibits a low peak-to-average power ratio in

the time domain," I agree with Dr. Akl that "those in the field refer to 'low' or 'high'

PAPR…[by] comparing the PAPR of one signal to the PAPR of another signal or a baseline

PAPR." Akl Decl. (Dkt. 131-2) at ¶ 43. That is why I testified in my prior declaration that a

POSITA would understand what a "low PAPR" is in the '366 Patent by comparing the PAPR of

the ranging signal to the baseline PAPR of the OFDMA system being implemented. This is

particularly true in the context of OFDMA systems like those called for by the claims of the '366

patent since, as Dr. Akl acknowledges, efforts to reduce the PAPR in OFDM systems (like those

I cited in my earlier declaration) were common at the time of the invention. A POSITA reading

the '366 patent would recognize that a "low PAPR" is the sort achieved by reducing the PAPR

relative to the OFDM baseline in the particular system being implemented. In my opinion, this

relative understanding alone provides reasonable certainty for a POSITA of the meaning of the term, and the exact numerical value of the PAPR of the ranging signal will depend on the implementation.

5.    In the event the Court wanted a specific numerical value with which to define "low," I also provided in my prior declaration an exemplary 12dB baseline PAPR that would generally capture most conventional OFDMA systems at the time of invention. *See* Dkt. 127-3 at ¶ 25.

6.    I understand Dr. Akl takes issue with the choice of 12dB as that general baseline, and he points out that the literature I cited, and other articles he cites, discuss OFDM systems with baseline PAPRs ranging from, for example, 7dB to 21dB. Akl. Decl. at ¶ 40. But I note that the 12dB baseline I identified falls squarely within that range, and is the baseline used by the Baxley article in its analysis, as Dr. Akl acknowledges. *Id.* at ¶ 51.

7.    Dr. Akl also ignores that I offered those articles as supporting examples, but that my testimony came largely from my own experience, at the time of invention, working with and implementing OFDMA systems in practice. I do not know if Dr. Akl had any real world experience working with these networks in the industry, but in my 25 years working as an engineer in the cellular space (including during the time of invention), my experience was that 12dB was a reliable baseline for real world OFDMA networks.

8.    In any case, the accuracy of my 12dB baseline is largely irrelevant, since I and Dr. Akl appear to agree that a POSITA would know to compare the PAPR of the ranging signal with the actual baseline PAPR of a particular system being implemented (even if not exactly 12dB).

9.    Furthermore, I understand Defendants and Dr. Akl also dispute my testimony that a 3dB reduction (as shown in the articles I cited) would be a sufficient reduction for the resulting signal to be considered as having a "low PAPR." For example, Dr. Akl observes that the Baxley article

I cited, though showing a 3dB reduction in PAPR, does not explicitly call the resulting PAPR "low." Akl Decl. at ¶ 52. But this misses the point.

10.    As with the argument above, the 3dB reduction I identified was in the context of the exemplary, generic OFDMA system I offered to the extent the Court wanted a definite numerical analysis. My overall point is that a POSITA would have understood how different techniques can reduce the PAPR of OFDM signals, and the resulting reduction (relative to the baseline) would be known as "low," just as Dr. Akl acknowledges. In Baxley, the reduction described in the article was 3dB, providing a sufficient exemplary reduction for the generic 12dB baseline.

11.    Outside the context of that specific example, Dr. Akl and Defendants do not appear to dispute my main point: that a POSITA reading the patent (and its description of improving power efficiency) would understand the type of appreciable reduction that can be achieved in an OFDMA system and improve power efficiency. *See* Dkt. 127-3 at ¶ 24.

12.    With respect to the term "a ranging sequence selected from a set of ranging sequences," I previously testified that a POSITA would understand the phrase to cover selection by either the mobile station or a base station, since both concepts were common in the art. I cited the 3GPP standards 25.214 V5.7.0 (2003-12) in section 6.1 as an example where, in a wireless network, a variable used in random access (a preamble scrambling code) is provided from the base station rather than selected by the mobile station.

13.    Dr. Akl appears to disregard this example, and dispute my conclusion, simply because the cited preamble scrambling code does not map precisely to the random access sequence in the '366 patent claims. *See* Akl Decl. at ¶¶ 60–62. But I was certainly not contending that the cited 3G standard maps to the '366 patent claims. I was using the 3G standard solely as an example of a base station providing random access criteria to a mobile station, to demonstrate that this

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