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On the Relationship Between the Transmitting and Receiving Properties of Antennas

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***Abstract*—This paper outlines an alternative way of presenting the relationship between the transmitting and receiving properties of antennas, which we think is more deductive. We suggest a *direct* method to calculate the effective area and the polarization mismatch factor without resorting to restricting assumptions or to the use of a specific antenna. This exposition was class-tested several times in our classes on antennas at the Technion. Our experience reveals that this sequence is better accepted in class than the sequences that can be found in existing antenna textbooks.**