Bare Demo of IEEEtran.cls for IEEE Conferences

Michael Shell
School of Electrical and
Computer Engineering
Georgia Institute of Technology
Atlanta, Georgia 30332–0250
Email: http://www.michaelshell.org/contact.html

Homer Simpson
Twentieth Century Fox
Springfield, USA
Email: homer@thesimpsons.com

James Kirk
and Montgomery Scott
Starfleet Academy
San Francisco, California 96678–2391
Telephone: (800) 555–1212
Fax: (888) 555–1212

***Abstract*—The abstract goes here.**

I. Introduction

jadfkjha

A. Modeller

In terms of calculating the path loss, different path loss propagation models can be applied, to calculate the power received, given different conditions. The Friss transmission equation calculates the power received, given only free space loss, meaning no reflections are introduced ,and is given in the following Equation:

$$P_r = P_t G_t G_r (\frac{\lambda}{4\pi d})^2 \tag{1}$$

where P_r is the power received, G_t and G_r are the gains in the transmitting and receiving antenna respectively. While λ is the wavelength of the transmitted signal, d is the distance between the transmitting and receiving antenna. The model given above given in Equation 1 is not the the complete Friss transmission equation, as it indicates perfect polarization, and the the antennas are pointing directly at each other, and perfect matching between the system and antennas. As it can be read the Friss transmission equation does not take into account the reflected wave. Therefore another model can be used called, the two-ray-ground-reflection path loss model, and is given as:

$$P_r(d) = \frac{P_t G_t G_r h_t^2 h_r^2}{L \cdot d^4} \tag{2}$$

where $P_r(d)$ is the power received given the distance between the transmitter and receiver antenna, G_t and G_r are the gains in the transmitting and receiving antenna respectively. h_t^2, h_r^2 is the height of the transmitting and receiving antenna respectively. While L is the system loss, and d^4 is the distance between the transmitter and receiver antenna. As the two-ray-ground-reflection path loss model considers two signals, a direct and a reflected signal, this gives the following condition

$$d < d_c \tag{3}$$

where d is the distance between the transmitter and receiver antenna, while d_c is called the cross over distance and is given as:

$$d_c = \frac{4\pi \cdot h_t^2 h_r^2}{\lambda} \tag{4}$$

If introduced condition is true the model predicts oscillations which are caused by the constructive and destructive combination of the two rays.

B. Subsection Heading Here

Subsection text here.

1) Subsubsection Heading Here: Subsubsection text here. Test billede her Fig. 1

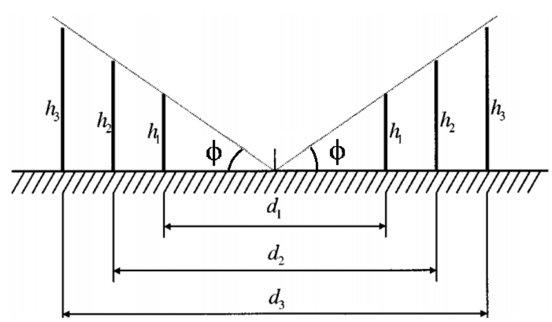

Fig. 1. Test billede

II. Conclusion

The conclusion goes here [**?**].

Acknowledgment

The authors would like to thank...