DRAFT

is a random variable with uniform distribution from to , is a binomial random variable with parameter *n*=1 (i.e. Bernoulli trial), parameter *p* is FFS, and is the maximum speed of the clutter. Figure 3 shows the resulting CDF when multiplying and . Essentially, 100\*(1-*p*)% of the scatterers will be static (have zero speed), whereas the remaining 100\*p % will have uniformly distributed speeds ranging from to , In other words, parameter *p* in the binomial random variable directly determines the proportion of mobile scatterers and can thus be selected to appropriately model more dynamic environment (higher *p*) or static (e.g., in case of completely static environment: *p=0* results in all scatterers having zero speed).



Figure 3. CDF of scatterer speed used to calculate Doppler for delayed paths. Curves show different *p* parameter for binomial distribution .

***Proposal 2: The impact of Tx and Rx movement should be modeled as***

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***Proposal 3: The impact of scatterer movement should be modeled as***

***where is a random variable with uniform distribution from to , is a binomial random variable with parameter n=1 (i.e. Bernoulli trial), parameter p is FFS, and is the maximum speed of the clutter.***

# Conclusion

***Proposal 1: The impact of moving scatterers on the Doppler should be modeled as a stochastic method.***

***Proposal 2: The impact of Tx and Rx movement should be modeled as***

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***Proposal 3: The impact of scatterer movement should be modeled as***

***where* is a random variable with uniform distribution from to , is a binomial random variable with parameter n=1 (i.e. Bernoulli trial), parameter p is FFS, and is the maximum speed of the clutter.**