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**Using a dispersive source signal to generate a dispersive field in a  
nondispersive medium**

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In typical treatments, dispersion is considered to be a property of the medium. For example, a free space, static, homogeneous medium is dispersionless while gravity waves, particularly in the case of surface waves in a deep body of water, exhibit dispersion. Here it is shown that dispersion in the field can also result from dispersion in the source signal. As a demonstration, a dispersive source signal is shown to introduce dispersion in a dispersionless medium. Consequently, through proper design of the source signal, it is possible to tailor the resulting field dispersion to suit a variety of applications. Here potential applications to imaging in complex media are discussed. Simulation and experimental results are presented.