

# Basic Fundamentals of Telecommunication



 **JRF** International  
Book  
Publication

Prof. Dr. Rajeev Shrivastava

  
PRINCETON INSTITUTE OF ENGINEERING  
& TECHNOLOGY FOR WOMEN  
Ghoshdangada, Koramangala (V)  
Chattahoochee, Atlanta, GA 30308

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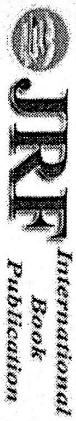
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**Prof. Dr. Rajeev Shrivastava**

CHAPTER-1  
INTRODUCTORY CONCEPTS

1. INTRODUCTORY CONCEPTS

1.1. What Is Telecommunication?

Many people call telecommunication the world's most lucrative industry. If we add cellular and PCS users, there are about 1800 million subscribers to telecommunication services worldwide (1999). Annual expenditures on telecommunications may reach 900,000 million dollars in the year 2000. Prior to divestiture, the Bell System was the largest commercial company in the United States even though it could not be found on the Fortune 500 listing of the largest companies. It had the biggest fleet of vehicles, the most employees, and the greatest income. Every retiree with any sense held the safe and dependable Bell stock. In 1982, Western Electric Co., the Bell System manufacturing arm, was number seven on the Fortune 500. However, if one checked the Fortune 100 Utilities, the Bell System was up on the top. Transferring this information to the Fortune 500, again put Bell System as the leader on the list. We know telecommunication is big business; but what is it? Webster's (Ref. 1) calls it communications at a distance. The IEEE dictionary (Ref. 2) defines telecommunications as "the transmission of signals over long distance, such as by telegraph, radio or television." Another term we often hear is electrical communication. This is a descriptive term, but of somewhat broader scope. Some take the view that telecommunication deals only with voice telephony, and the typical provider of this service is the local telephone company. We hold with a wider interpretation. Telecommunication encompasses the electrical communication at a distance of voice, data, and image information (e.g., TV and facsimile). These media, therefore, will be major topics of this book. The word media (medium, singular) also is used to describe what is transporting telecommunication signals. This is termed transmission media. There are four basic types of medium: (1) wire-pair, (2) coaxial cable, (3) fiber optics, and (4) radio.

# About Author



He has completed B.E. (Electronics & Communication) in 2002 from GRKIST Jabalpur along with M.E. (Digital Communication) in 2009 from SRIT Jabalpur and completed PhD (Image Processing) from JWU Jaipur . He completed M.B.A (Marketing) in 2009 from IGNOU . His total work experience in academic field is nearly 11 years along with industrial experience of 3 years. He has published 27 international papers and presented 16 papers in international/national conference. Presently he is working as a Professor & Head (ECE) in Indur Institute of Engineering & Technology , SIDDIPET.

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