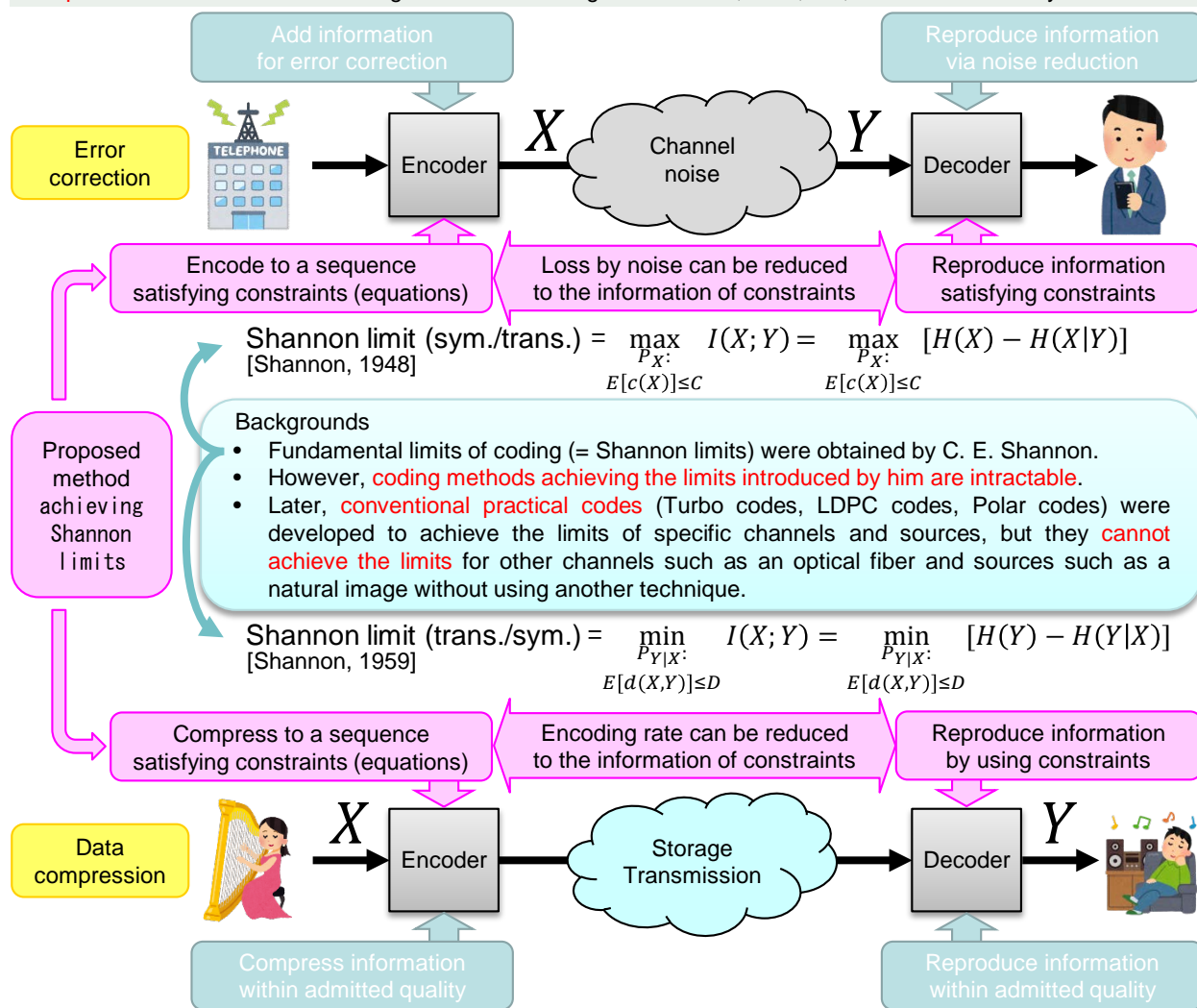


~Multipotential coding method achieving the Shannon Limit~

Abstract

We are developing methods of **error correction** and **data compression**. Conventional practical methods were developed independently depending on the purpose and achieve fundamental limits only for specific channels/sources. To solve these problems, we developed a **theory of coding method** based on the constrained numbers (CoCoNuTS*) and **proved mathematically that we can achieve the limits for any channels/sources** by using this method. By using this **unified theory**, we can construct **practical codes achieving the limits** for many scenarios of transmission/storage. In future, this technology can be applied for **highly reliable broadband transmission** on a channel such as an optical fiber, a wireless LAN, and a mobile phone, and for **high quality compact format** for sounds and images on media/storage such as CD, DVD, BD, and a flush memory.



* CoCoNuTS = Code based on Constrained Numbers Theoretically-achieving Shannon limit

[Reference]

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