

Theorem 3.9 There exists a unique signed measure on \mathcal{F}_n , denoted by μ^* , which is consistent with all Shannon's information measures.

Implications

- Can formally regard Shannon's information measures for n r.v.'s as the unique signed measure μ^* defined on \mathcal{F}_n via the substitution of symbols.
- Can employ set-theoretic tools to manipulate expressions of Shannon's information measures.