



## Joint Source Channel Coding Using Arithmetic Codes

By Khalid Sayood

Morgan & Claypool. Paperback. Book Condition: New. Paperback. 78 pages. Dimensions: 9.2in. x 7.5in. x 0.2in. Based on the encoding process, arithmetic codes can be viewed as tree codes and current proposals for decoding arithmetic codes with forbidden symbols belong to sequential decoding algorithms and their variants. In this monograph, we propose a new way of looking at arithmetic codes with forbidden symbols. If a limit is imposed on the maximum value of a key parameter in the encoder, this modified arithmetic encoder can also be modeled as a finite state machine and the code generated can be treated as a variable-length trellis code. The number of states used can be reduced and techniques used for decoding convolutional codes, such as the list Viterbi decoding algorithm, can be applied directly on the trellis. The finite state machine interpretation can be easily migrated to Markov source case. We can encode Markov sources without considering the conditional probabilities, while using the list Viterbi decoding algorithm which utilizes the conditional probabilities. We can also use context-based arithmetic coding to exploit the conditional probabilities of the Markov source and apply a finite state machine interpretation to this problem. The finite state machine interpretation also allows...



**READ ONLINE**  
[ 9.2 MB ]

### Reviews

*This publication is definitely worth buying. It can be loaded with wisdom and knowledge I am easily could possibly get a satisfaction of looking at a composed publication.*

-- **Rhiannon Steuber**

*Very helpful to all type of individuals. It really is rally interesting through looking at time. Its been designed in an extremely basic way which is just soon after i finished reading this pdf through which basically modified me, change the way i believe.*

-- **Tyshawn Brekke**