Abstract

Compression has always played a crucial role in storage and transmission of heavier multimedia files. The existences of compression algorithms are more than two decade old. The normal compression algorithms are sometimes not required to process a signal in many cases where the signals are sparse. In such cases, compressive sensing highly contributes and compensates the issues of conventional compression algorithms as it performs sampling as well as compression at a same time. The concept of compressive sensing is quite new and is not much in matured stage. Our findings reported in this paper is a result of observation being carried out on all major research journals, which states that there are little amount of studies being done on compressive sensing and reconstruction of multimedia contents. The paper also discusses about the significant research gap and evaluates the effectiveness of existing techniques.

References

- Bing Han, Peng Wu, Dapeng Wu, "Image representation by compressed sensing"; Image Processing, 2008. ICIP 2008, 15th IEEE International Conference on,
Scaling the Effectiveness of Existing Compressive Sensing in Multimedia Contents

Scaling the Effectiveness of Existing Compressive Sensing in Multimedia Contents

  sensing for spatial-multiplexing cameras," Computational Photography (ICCP), 2012 IEEE
  International Conference on, vol., no., pp. 1-10, 28-29 April 2012.
- Hua Chen, Anhong Wang, Xiaoli Ma, "An Improved Wireless Video Multicast
  Based on Compressed Sensing," Intelligent Information Hiding and Multimedia Signal
- Pudlewski S, Melodia T., "Compressive Video Streaming: Design and
- Pudlewski S, Melodia T., "RA-CVS: Cooperating at low power to stream
  compressively sampled videos," Communications (ICC), 2013 IEEE International
- Yuan Xin, Jianbo Yang, Patrick Llull, Xuejun Liao, Guillermo Sapiro, David J. Brady, and
- Ying Liu, Ming Li, Pados, D. A., "Motion-Aware Decoding of Compressed-Sensed Video,"
  Circuits and Systems for Video Technology, IEEE Transactions on, vol. 23, no. 3,
- Michael Iliadis, Jeremy Watt, Leonidas Spinoulas, Aggelos K. Katsaggelos, "Video
  Compressive Sensing Using Multiple Measurement Vectors," IEEE International
- Giacobello, D., Christensen M. G, Murthi M. N, Jensen S. H, Moonen M., "Retrieving
- Christensen M. G, Stergaard J, Jensen S. H., "On compressed sensing and its
  application to speech and audio signals," Signals, Systems and Computers, 2009
  Conference Record of the Forty-Third Asilomar Conference on, vol., no., pp. 356-360, 1-4
  Nov. 2009.
- Bruno Masiero and Martin Pollow, "A Review of the Compressive Sampling
  Framework in the Lights of Spherical Harmonics: Applications to Distributed Spherical
  Arrays," Proc. of the 2nd International Symposium on Ambisonics and Spherical
- Anthony Griffin, Eleni Karamichali and Athanasios Mouchtaris, "Speaker
  Identification using Sparsely Excited Speech Signals and Compressed Sensing," 18th
  European Signal Processing Conference (EUSIPCO-2010), Aalborg, Denmark, pp. 1444-1448,
- Asaei A, Bourlard H, Cevher V., "Model-based compressive sensing for multi-party
  distant speech recognition," Acoustics, Speech and Signal Processing (ICASSP), 2011
- Qun Feng Tan, Georgiou P. G, Narayanan S., "Enhanced Sparse Imputation
  Techniques for a Robust Speech Recognition Front-End," Audio, Speech, and Language
- Yue Wang, Zhixing Xu, Gang Li, Liping Chang, Chuanrong Hong, "Compressive


Index Terms

Computer Science  Information Science

Keywords

Compressive Sensing  Compressive Sampling  Compression  Multimedia  Lossless.