Taming the Torrent: Future Military Signal Processing and Information Fusion

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Electronic devices, from unattended ground sensors to small radars, have become a ubiquitous part of Military operations. With the increased use of sensor systems comes an increased volume of data that must be processed, moved, assessed, and decided upon within the short time scales associated with battlefield operations. Onboard processing, information fusion, and other signal processing methods can be utilized to reduce the overall quantity of information flowing and to move toward giving the Soldier or decision-maker the best possible targeted information while limiting the resources required to generate the decision. An overview of sensor-technology and signal-processing ongoing in the US Army will be given.