

A clear view through fog of city surveillance

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CCTV—closed-circuit television—is widely used to carry out surveillance in a wide range of environments from military installations to shopping centres. Modern video surveillance, with recording and playback facilities, multiple cameras, and other infrastructure are quite unwieldy and rely on expensive computer servers that can process and store video.

Research carried out in India, where [video](#) surveillance is becoming increasingly important as the incidence of anti-social behaviour in cities rises, seeks to reduce the demands on computing infrastructure by employing, not [cloud computing](#), but fog computing. P. Prakash and Dhinesh Kumar of the Amrita School of Engineering, in Coimbatore, Raghavi Suresh of Jain University in Bangalore, explain how they have modelled and simulated just such a system using an application known as iFogSim. Fog computing, their model suggests, is more efficient and more secure than a cloud computing approach to computing infrastructure for urban video [surveillance](#).

The team explains that smart [video surveillance](#) systems must store video sequences and metadata associated with a place and the events that occur in that place. While cloud computing offers the remote and putatively distributed tools for such a task, fog computing, which is an extension of cloud computing, makes this still more efficient. The cloud computing paradigm offers agility, resource pooling and sharing. The fog paradigm utilizes resources on the edge of the system rather than reverting to a centralized cloud cluster. This means that delay, or latency, issues often associated with the cloud environment, are avoided by having some of

the processing and storage handled at the edges of the architecture closer to the end-users, in other words.

More information: P. Prakash et al. Smart city video surveillance using fog computing, *International Journal of Enterprise Network Management* (2019). [DOI: 10.1504/IJENM.2019.103165](https://doi.org/10.1504/IJENM.2019.103165)

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