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TwiddleNet: Smartphones as Personal Servers

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TwiddleNet uses smartphones as personal servers to enable instant content capture and dissemination for first-responders. It supports the information sharing needs of first responders in the early stages of an emergency response operation. In TwiddleNet, content, once captured, is automatically tagged and disseminated using one of the several networking channels available in smartphones. TwiddleNet pays special attention to minimizing the equipment, network set-up time, and content capture and dissemination effort. It can support small operations of emergency responders in the first 48-72 hours of an emergency response by using handheld devices based infrastructure and scale up to handle hundred of users with more robust backend infrastructure.

TwiddleNet harnesses the power of pervasive edge devices, primarily smartphones, to enable 1) instant content capture and publish, 2) full owner control of content, and 3) search, view and download of content which was previously inaccessible. It exploits the multiple communication modalities available in modern smartphones (GSM/CDMA, GPRS/EDGE, WiFi, Bluetooth – all in a single device) to provide a fail-safe and rapidly-deployable infrastructure which is so critical to first responders.

TwiddleNet is useful for a number of applications including first-responder networking and information sharing, social networking and applications that require immediate content capture and dissemination such as disaster reporting. By using existing lightweight, small and battery-powered devices, TwiddleNet enables decision-makers real-time access to information from the front lines.

TwiddleNet portal can be scaled up or down depending on the need of the operation. It can be run entirely on handheld devices to support small first-responder teams and on large computers to link together millions of devices sharing images, videos and messages.

In summary, TwiddleNet is a:
  ➢ Mechanism to harness the power of pervasive edge devices – smartphones
  ➢ Gateway to millions of mobile personal servers
  ➢ System to support instant content capture and publish
  ➢ System to allow access to content which is otherwise inaccessible.

TwiddleNet Quad Chart

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