

## Sophistication of seismic telemetry using old metallic cable and ADSL modems

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Already deployed an old shielded metallic cable and ADSL (asymmetric digital subscriber line) modems were used to sophisticate an existing telemetry station in Asama volcano seismic network. Only a couple of pairs (or at least a single pair) of copper wires are enough for data link and power supply. We used Paradynes's ReachDSL modems to connect the 5 km long section between a 24 bit digitizer at KUR observation site and a receiving PC at AVO (Asama Volcano Observatory). The link speed measured 768 kbps in both directions, which is enough to send three component seismic waveform data. Power is supplied from AVO to KUR through another pair of wire in the same cable. Use of ADSL modems has enlarged the dynamic range, eliminated noise induction in the cable, and reduced necessary number of wires to telemeter.