Femtosecond PW class laser pulses are being used in vacuum systems for doing relativistic intensity experiments. But to carry out applications outside the vacuum system, for example in air, the laser pulse will encounter an interesting challenge; i.e. filamentation. That is to say, one would not be able to focus the laser pulse down to relativistic intensity once it propagates outside the vacuum system. In air, the intensity inside the filament would be around $10^{14}$ W/cm$^2$ because of intensity clamping. However, there is an advantage. One could induce remote interaction at the same clamped intensity that other longer nanosecond laser pulses would not be able to do easily. Furthermore, PW class lasers would give rise to what I would call super-filamentation. This is the case when even the local peak power across much of the laser beam cross section is higher than the critical power for selffocusing.

Clustering and fusion of these multiple filaments would occur if the beam were properly manipulated resulting in a large volume of constant high intensity, high in the sense that any molecule would be ionized and dissociated inside this super-filament zone. Some possible applications will be discussed based upon known but low power experimental results. They include remote lasing in air, remote high energy THz generation, remote pollutant detection, remote breakdown spectroscopy, remote chemical reaction, weather control, super-white light laser in the sky, etc.