Getting a virtual grasp on the virtual grasp: virtually inside a myoelectric prosthetic arm

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Myoelectric prosthetic arms also may be prone to electromagnetic field interference (1), particularly when riding trains or trams. When troubleshooting one of these arms equipped with a recent prosthetic hand (left), computed tomography\textsuperscript{1} revealed that it has an interesting arrangement of untwisted cables (enlarged, right) that furthermore exhibit circular loops (arrow). Untwisted (2) wires containing circular loops (3) have the capacity to act as an antenna. The term “crosstalk” refers to communication between electrically isolated and thus distinct conductors. Building electrode and cable configurations geared towards minimal crosstalk always has been an issue in myoelectric prosthetic arms, whereas using “crosstalk” to denote ill-defined spread of myoelectric signals across technically non-insulated biological tissues highlights the fact that we are not (yet) robots (4). Specific device testing may be required to allow a car driver to use a myoelectric arm to conduct a vehicle in the vicinity of strong electromagnetic fields. In addition, a prosthetic arm’s cable details could be taken into account when investigating consequences of possible prosthetic device malfunction, such as traffic accidents.
