

What is *e-NABLE*?

e-NABLE is an all-volunteer, worldwide network that had modest beginnings as a small group of volunteers who began designing and 3-d printing mechanical prostheses several years ago. All designs are non-proprietary and are offered as open source documents, so anyone with access to a computer and a 3D printer may download and print any device in the ever-growing inventory. More information about the parent organization can be found at enablingthefuture.org.

The local chapter, Handling the Future, consists of volunteers from a variety of professional backgrounds, including many with healthcare experience. Others contribute expertise in CAD design, IT, and various skills related to their respective professions in order to help fulfill the organization's mission to provide 3D printed hand prostheses or adaptive devices **at no cost** to those in need.

Following a client request, one or more members of Handling the Future will assess client suitability, needs and

desires; take measurements, and if indicated, perform a 3D scan of the limb, to assist in locating an existing open source file or create a new custom design.

It is expected that the client, or in the case of a child, a parent or caregiver will participate fully in the process by

- 1) contributing necessary information,
- 2) communicating with Handling the Future in a timely manner, and
- 3) occasional personal contact, as needed, at a location agreed upon by both parties.



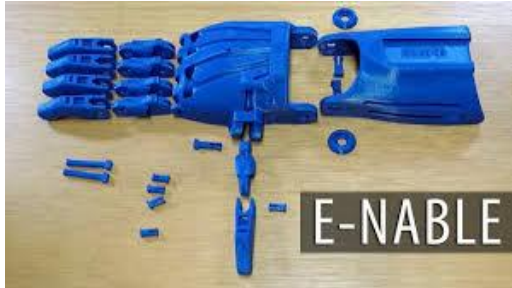
Generally, the mechanical prostheses provide a functional grasp driven by motion of the wrist or elbow which applies tension to cords running from the fingers to the proximal portion of the device.

Custom designs are also possible that may not look like hands, but can offer the client a chance to return to a favored activity, such as riding a bike, swimming, or even playing a musical instrument. Client stories and photographs describing use of the various 3-d printed prostheses or other devices may be found at enablingthefuture.org.

The 3D devices have some limitations related to their material composition, and the client must understand that the hand prostheses provide only a gross functional grasp or pinch, and lack the mobility and fine control of a normal hand. Care and use of the device will be explained by a member of the organization as part of the request and design process.



More About 3D Printed Prostheses and Devices



Individual parts of a prosthesis are built up layer by layer in a printing mechanism that feeds a continuous filament to fabricate each section. When complete, the pieces are assembled, and a strong, thin cord is fastened to each finger and fastened to the device above the wrist. This cord provides the pull to flex the fingers and grasp an object. In the unassembled “hand” shown above, bending the wrist will close the fingers. For this example, at least a small remnant of hand below the wrist is necessary to operate it.

For additional information, or to request a prosthesis or other device:

Contact Handling the Future

<http://www.handlingthefuture.com/>

Clients may self-refer and request help; a referral from an outside party such as physician or other healthcare provider is not necessary.



Handling the Future

For people in the Tampa Bay area who have lost part or all of a hand or arm, whether from conditions at birth, from trauma, or if they have an intact hand that lacks full function because of a neurological injury or condition, it may be possible to acquire a simple mechanical hand prosthesis at no charge. A request may be sent to Handling the Future, a non-profit organization based in Wimauma, Florida, which is part of a larger organization called e-NABLE.