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Prosthetic Socket for 3rd World Countries Ultraflex Systems, Inc. is an orthotic and prosthetic research and development company that has been in business since 1990. This IPD is phase II of the development of a re-formable socket for below knee amputees in developing and emerging countries. The focus of phase II will be adapting the proof of concept prototype for actual patient fitting and use to further refine the design. The challenges offered for amputees in these countries are multiple compared to amputees in developed countries. Expense, maintenance, accommodation for limb volume changes, suspension method, environmental conditions and functionality are just a few of the considerations.

The socket design must be compatible with existing BK components as well as new components developed as an outgrowth of this project. In addition it must fit “right out of the box” with minimally trained healthcare providers and limited access to prosthetic facilities. The design must be re-formable at any time, provide secure attachment to the patient’s residual limb and allow complete range of motion. It must be compatible with kneeling and sitting postures common in eastern cultures and be culturally appropriate. Finally, the socket design needs to be part of a complete BK prosthesis that can be provided at a significantly low cost.