iCharge: An Analysis of Products and Processes that Can Extend the Life of iOS Cables

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Apple product users have long accepted that the power cord of the charger for their products does not have the durability or quality of Apple's other products.Because the power cords have no stress relief where the wire meets the block, they start to break,fray, and get exposed to the point where they become unusable and a fire hazard. Based on this, can a device be developed to prevent fray and extend the life of the charge cord? Products and processes that have been utilized to extend the cord's life were evaluated for strengths and weaknesses. The processes were also tested for effectiveness. This information was then used to design several prototypes that could overcome the problem of fraying cords. The three best designs are then developed into samples. After review of all aspects of the samples, one design will be printed on a 3D printer for further testing. The goal is then to ultimately produce and manufacture a simple, easy-to-use charger protector that takes a proactive approach to keeping Apple cords from fraying. The small, heat resistant device slides or clips onto the end of a charging cable, providing support at the connection points, reducing strain and lengthening the life of the cord.

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