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Proposing Smart Clothing for Addressing Criminal Acts Against Women in South Africa

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Abstract : Crimes against women is a global concern, and South Africa, in particular, is in a dilemma of dealing with constant criminal acts that face the country. Debates on violence against women in South Africa cannot be overemphasised any longer as crimes continue to rise year by year. The recent death of a university student at the University of Cape Town, as well as many other cases, continues to strengthen the need to find solutions from all the spheres of South African society. The advanced textiles market contains a high number and variety of technologies, many of which have protected status and constitute a relatively small portion of the textiles used for the consumer market. Examples of advanced textiles include nanomaterials, such as silver, titanium dioxide and zinc oxide, designed to create an anti-microbial and self-cleaning layer on top of the fibers, thereby reducing body smell and soiling. Smart textiles propose materials and fabrics versatile and adaptive to different situations and functions. Integrating textiles and computing technologies offer an opportunity to come up with differentiated characteristics and functionality. This paper presents a proposal to design a smart camisole/Yoga sports brazier and a smart Yoga sports pant garment to be worn by women while alone and while in purported danger zones. The smart garments are to be worn under normal clothing and cannot be detected or seen, or suspected by perpetrators. The garments are imbued with devices to sense any physical aggression and any abnormal or accelerated heartbeat that may be exhibited by the victim of violence. The signals created during the attack can be transmitted to the police and family members who own a mobile application system that accepts signals emitted. The signals direct the receiver to the exact location of the offence, and the victim can be rescued before major violations are committed. The design of the Yoga sports garments will be done by Professor Mason, who is a fashion designer by profession, while the mobile phone application system will be developed by Mr. Amos Yegon, who is an independent software developer.

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