

Extract from

Origin and Development of Robotic Art

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While tactile participation is crucial to Squat, in Ihnatowicz's work it is the voice and the proximity of viewers that prompt responsive behavior. Working in relative isolation in England, after immigrating from his native Poland and studying at the Ruskin School of Drawing and Fine Art at Oxford, Edward Ihnatowicz (1926-1988), perhaps the least known of the three pioneers, created between 1969 and 1970 *The Senster*, a biomorphic computer-controlled robotic creature with shy behavior. This piece was shown at Philips' permanent showplace Evoluon, in Heindhoven, Holland, from 1970 to 1974, when it was dismantled. Built after the articulation of a lobster's claw, *The Senster* was about 15 feet long by 8 feet high and occupied a space of 1,000 cubic feet. Its head had sensitive microphones and motion-detectors, providing sensorial input that was processed by a digital Philips minicomputer in real time. The *Senster's* upper body consisted of six independent electro-hydraulic servo-mechanisms with six degrees of freedom. Responding to motions and sounds within one or two seconds, *The Senster* gently moved its head towards quieter and more subtle viewers. Loud and agitated viewers saw the creature shy away and protect itself from any harm. In its sensual, and apparently intelligent behavior, the piece was very engaging to a wide audience. While

the debate on the use of computers in art at the time revolved around the creation of still or sequential images, and the use of static or mobile plotters to produce such images, Ihnatowicz merged software-based parametric behavior with hardware presence in a real space as he introduced the first computer-controlled robotic artwork. In other words, "*The Senster*" is the first physical work whose expression in space (its choices, reactions, and movements) is triggered by data processing (instead of sculptural concerns).