

## FACT SHEET

# **Animatronics Are Sophisticated Mixtures of Art and Technology**

GARNER HOLT PRODUCTIONS, INC.

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#### GARNER HOLT PRODUCTIONS

GHP is the world's largest designer and manufacturer of animatronics for theme parks, museums, dining and retail locations, and other attractions around the world. Clients include The Walt Disney Company, Universal Studios, NASA, CocaCola, CEC Entertainment, and hundreds more. Find out more at www.garnerholt.com

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Mechanized Magic Beneath their realistic surfaces, animatronics are complex machines designed to look alive

Since 1977, Garner Holt Productions, Inc. has created nearly 3,000 individual animatronic figures for some of the world's larges theme parks, museums, and retail and dining locations. Highly realistic animatronics remain the core of our company. Here are facts about the design and construction of our incredible animatronic figures.

#### How do we start?

- GHP works with designers to determine the number of functions, pose, realism, voice, and location of animatronics within a project
- Our engineers use SolidWorks<sup>™</sup> 3-D modelling software to accurately design figures digitally
- Researchers carefully study people, animals, or whatever the animatronic will be to make sure it looks like the real
  thing, down to the smallest detail

#### How do they look so real?

- Sculptors use detailed research images to create likenesses of people and animals virtually indistinguishable from their real life counterparts
- Our skins for animatronics are made of a specially-formulated silicone that mimics the properties of real skin and looks great painted
- Fur and hair are hand-punched one-byone to ensure total realism
- We consult many sources to make sure our costumes look as authentic as possible—sometimes we use authentic vintage clothes and accessories



**MAKING IDEAS MOVE** 

Our animatronic figures take the form of cartoon characters, people, animals, dinosaurs, and just about anything imaginable

#### How do they move?

- Most of our animatronics operate using pneumatic (compressed air) cylinders.
  We also use high-pressure hydraulic actuators and electric servomotors to act as the "muscles" for motion
- Each figure has a stainless steel and aluminum "skeleton" frame which supports the actuator "muscles," fiberglass body shells, silicone skins, costumes, and hair or fur
- Animatronics have a computerized showcontroller "brain" that stores all their motion profile and audio information and allows them to perform using a number of inputs. They are programmed using special animatronics software

### How much do they cost?

 Depending on number and complexity, figures can take anywhere from six weeks to eighteen months to design and build and cost anywhere from \$10,000 to over \$1,000,000. With proper care and maintenance, they can perform for decades on end