Sprout by HP 3D Capture Stage

What is a 3D Capture Stage?

The Sprout by HP 3D Capture Stage is an optional accessory that improves ease of use and increases the reliability of scan results. Any user of the 3D Capture application can enhance their experience with the 3D Capture Stage.

The Sprout by HP 3D Capture Stage makes the scan process easier by rotating the object automatically during scan cycles. It also tilts making more of the object visible to the overhead camera, which improves the resulting scan and may reduce the number of required scan cycles.

How can my customer obtain this product?

For commercial customers, the 3D Capture Stage is available as an After Market Option (AMO): T7U17AA Sprout by HP 3D Capture Stage (#ABB in EMEA).

What types of customers might find 3D capture useful?

• **Progressive schools:** teachers and students at STEM/ STEAM and project-based schools. Examples include teaching 3D design and print concepts.

• **Entrepreneur craftspeople,** e.g., an artist who wants to incorporate a scanned shape into a creative project.

• **3D Print as a service** outlets, offering scan-edit-print stations when combined with a 3D printer - e.g., for customers to create replicas of memorabilia or digitally enhance favourite toys or handicrafts for use as holiday gifts.

What kind of objects can I scan?

A variety of objects can be scanned-ideally:

• Unique, one-of-a-kind handmade objects

• Sea shells, rocks and stones, bark and wood, and other objects made of natural materials

• Objects that are hard to reproduce digitally with a CAD or solid modelling program

• Kids' crafts, sculptures, 3-dimensional artwork

Objects that are reflective, transparent, have very uneven textures such as fur, are very dark in colour, or are highly symmetrical do not scan well. Matte objects, with even textures and lighter colours will scan better.

The object being scanned must fit on the mat in the volume of light emitted by the projector - approximately 12 inches (30.48 cm) by 16 inches (40.64 cm) on the mat and decreasing toward the projector.

What are some example uses?

• **Digitise interesting shapes that are hard to reproduce digitally**
  Example: 3D scanning a physical model or artefact as a prototype, part, or surface texture that can be digitally enhanced and used in a 3D multi-media or entertainment project, such as a character in a game.

• **Personalise physical objects**
  Example: Involved parents can scan an object such as a toy and personalise it by mashing it up in a creative project or modifying it by adding a platform/base or embossing their child's name. The personalised object can be 3D printed and personalised further by painting or otherwise embellishing the finished project.

- **Learn about 3D, the workflow and the science**
  Example: Progressive schools can use 3D Capture as a way to introduce students to the world of 3D. Since 3D Capture is included as a base application in the Sprout Workspace, this application comes at no incremental cost to schools who already use Sprout as an educational tool.

- **Create custom physical objects**
  Example: A designer can create a piece of jewellery that incorporates a personal object or one-of-a-kind artefact such as children's art into the design.

3D Capture is not intended for users needing precision scans such as for product design (e.g., designing a phone case by 3D scanning a phone) or creating museum-quality scans, amongst others.

How long does it take to scan an object?

The time required to scan an object depends on a variety of factors, including the shape and complexity of the object. To successfully capture all sides of an object, the user will need to reposition the object to reveal hidden surfaces and rescan with additional scan "cycles". A scan cycle is 6 individual scans.

A 3D Snapshot, which takes a single 3D scan of one side of an object takes approximately 35 seconds to complete. A basic 3D Capture with just one complete cycle of 6 scans will take approximately 5 minutes. A 3D figurine, such as the elephant included in the Sprout 3D Gallery, may require three or more scan cycles and can take 20 minutes or more.

Why does my scanned image after a scan cycle show additional shapes apparently fused with my scanned object?

Please ensure that the Sprout by HP 3D Capture Stage is not disturbed or moved even slightly during the positioning of the object on the Stage, as this would invalidate the initial background scan of the Stage and cause such artefacts to appear.

What are the of 3D Capture technical specifications?

- Mesh density – 200 microns

- Detail resolution – About 500 microns

- Surface texture resolution – from about 100 dpi at HP Touch Mat up to about 200 dpi nearer the camera

What do I do with the putty included with Sprout by HP 3D Capture Stage?

We included removable adhesive putty with the Stage to help fix objects onto the stage to avoid movement when in the tilted position. The putty can also be used to prop up one side of an object to better expose a surface during the scan.

If you need additional putty, you can use off-the-shelf removable, reusable adhesive putty available in retail stores. Please ensure that it is of the removable kind that comes off easily without leaving any residue on the Stage surface. Non-removable putty can damage the Stage. Putty rated with higher hold strength will help ensure heavier objects are held steady on the Stage.

What are the Sprout by HP 3D Capture Stage limitations?

The Sprout by HP 3D Capture Stage can scan objects weighing up to a specified limit of 2 kilogrammes (4.4 pounds). If the object is centred on the turntable it can support more weight (up to as much as 10 pounds). If an object is too heavy, the Stage will not turn. Objects that are not rigid will not scan properly on the Stage because they may change position when the Stage rotates.

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