The X3D Diamond Awards

Sponsored by SpaceTime3D

Saturday, 9 April 2005

Overview

SpaceTime3D is proud to announce a state-of-the-art X3D modeling contest for the Web3D community. Contestants will produce high-fidelity models of actual diamonds using the latest X3D Graphics and the Web technologies. Specifically the X3D Diamond Awards program asks contestants to use the basic 3D geometry of a round brilliant diamond and inspect a reasonable facsimile, then model the diamond in full detail and render it in a 3D browser of their choice. The primary goal for winning this competition is to model and display the diamond to its fullest potential, expressing the diamond as realistically as possible.

Judging Criteria and Eligibility

Judges will grade all entries based on technical quality, physical realism and aesthetic appeal. This contest will show the public how to reach maximum fidelity in reproducing an accurate 3D interactive image of a diamond, all based on the characteristics of a real diamond and using the latest technology associated with X3D.

This contest is open to everyone. If you can produce 3D content that functions over the Web, you can participate. Due to the highly competitive nature of this work, all entries will be treated under Web3D Consortium rules as consortium-confidential material in order to protect the intellectual property rights of participants. Winning models will be made publicly available following the awards at SIGGRAPH 2005 during the week of 1-4 August 2005.

Categories and Prizes

First Prize will be awarded to the entrant whose X3D world (1) aesthetically represents a round brilliant diamond most accurately, (2) has the most intuitive user interface that allows one to tour the diamond (both internally and externally) through a viewpoint tour and (3) implements the most functionality to dynamically affect the diamond through programmatic access or other method to vary its shape or anatomy based on the parameters that we supply. A gift certificate of $3,000 will be awarded to the winning entrant, to be spent at either www.americandiamond.com or www.americanpearl.com.

A close up of an ideal cut round brilliant diamond with 57 facets.

Second Prize will be awarded to the entrant who submits the finest humanoid animation (H-Anim) X3D model where a round brilliant diamond is applied to a ring setting and then showcased either on a hand or full-body model model. A gift certificate of $1,500 will be awarded to the winning entrant to be spent at either www.americandiamond.com or www.americanpearl.com. Contestants who enter the First Prize contest are eligible to repurpose their work and win Second Prize.

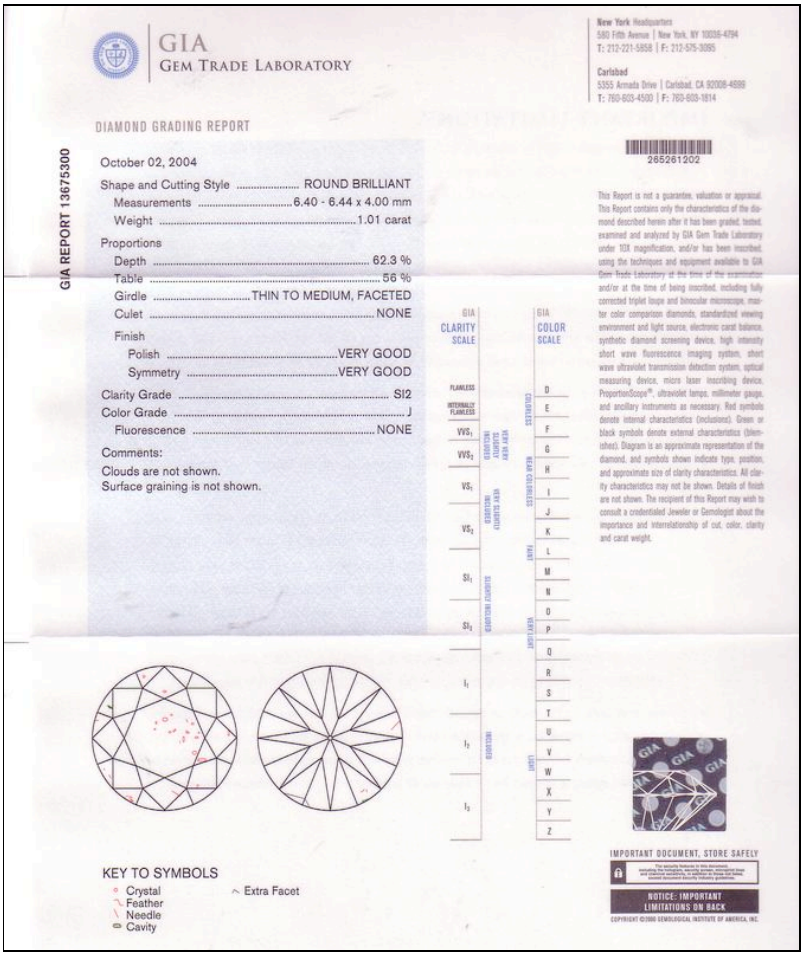
A close up of a three-stone diamond and platinum ring on a hand.

Assets Provided to each Contestant

SpaceTime3D will provide a cubic zirconia-A synthetic gemstone, ZrO_2, used in jewelry as an artificial diamond that closely represents what an actual diamond looks like. In addition, we will supply contestants with a jewelers loop (10 power magnification) and tweezers for viewing. In this way, modelers can study and examine the cubic zirconia to visually understand how this esoteric gem reacts to light when it is turned. Based on what they learn visually, each contestant can then determine how to effectively apply advanced X3D rendering effects to the diamond geometry that they are creating.

Diamond Documentation

SpaceTime3D will also supply contestants with the grading certificate that accompanies the model of the round brilliant diamond that they will be rendering. Upon careful examination of this certificate, modelers will discover that there is an array of criteria that are used to evaluate the worth of a diamond based on the nomenclature shown on this certificate. Once they have signed up for the X3D Diamond Awards, contestants will receive a more detailed definition of grading criteria and how to apply them to the diamonds they are modeling.



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DIAMOND GRADING REPORT

GIA REPORT 13675300

265261202

October 02, 2004
Shape and Cutting Style ..... ROUND BRILLIANT
Measurements ..... 6.40 - 6.44 x 4.00 mm
Weight ..... 1.01 carat
Proportions
Depth ..... 62.3 %
Table ..... 56 %
Girdle ..... THIN TO MEDIUM, FACETED
Culet ..... NONE
Finish
Polish ..... VERY GOOD
Symmetry ..... VERY GOOD
Clarity Grade SI2
Color Grade ..... J
Fluorescence ..... NONE
Comments:
Clouds are not shown.
Surface graining is not shown.

This Report is not a guarantee, valuation or appraisal. This Report contains only the characteristics of the diamond described herein after it has been graded, tested, examined and analyzed by GIA Gem Trade Laboratory under 10X magnification, and/or has been inscribed, using the techniques and equipment available to GIA Gem Trade Laboratory at the time of the examination and/or at the time of being inscribed, including fully corrected triplet loupe and binocular microscope, master color comparison diamonds, standardized viewing environment and light source, electronic carat balance, synthetic diamond screening device, high intensity short wave fluorescence imaging system, short wave ultraviolet transmission detection system, optical measuring device, micro laser inscribing device, ProportionScope®, ultraviolet lamps, millimeter gauge, and ancillary instruments as necessary. Red symbols denote internal characteristics (inclusions). Green or black symbols denote external characteristics (blemishes). Diagram is an approximate representation of the diamond, and symbols shown indicate type, position, and approximate size of clarity characteristics. All clarity characteristics may not be shown. Details of finish are not shown. The recipient of this Report may wish to consult a credentialed Jeweler or Gemologist about the importance and interrelationship of cut, color, clarity and carat weight.

GIA CLARITY SCALE
FLAWLESS
INTERNALLY FLAWLESS
VVS1
VVS2
VS1
VS2
SI1
SI2
I1
I2
I3

GIA COLOR SCALE
D E F G H I J K L M N O P Q R S T U V W X Y Z

KEY TO SYMBOLS
Crystal
Feather
Needle
Cavity
Extra Facet

IMPORTANT DOCUMENT, STORE SAFELY

NOTICE: IMPORTANT LIMITATIONS ON BACK

Sample diamond certificates are provided to show detailed jewel characteristics.

Diamond History

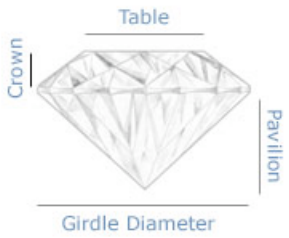
Throughout history, diamonds have shown themselves in practically every civilization and culture imaginable. From ancient Egypt to Mesopotamia, the unmistakable presence of diamonds is difficult to deny. In these early days, where much upon the earth was still undiscovered, the sheer beauty, brilliance and awe of the first diamond ever discovered, surely differentiated itself from anything else.

Perhaps it was the diamond's beauty that first enamored these ancient people? Or could it be the diamonds' indestructibility that caused people who owned them to associate similar feelings about themselves. Of course, with this beauty came an increased demand for something that was still unknown. In fact, the harder the ancients tried to find diamonds, the more difficult it was to find them. Within this first cycle of discovery, awe and the need to have more, the ancients unknowingly created a process that would give birth to the most valuable gem in the world- Diamonds. This is how diamonds have become a part of our lives.

Diamond Tutorial

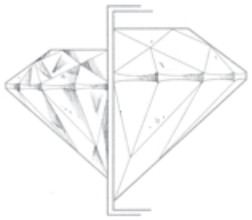
Cut: facet by facet

A diamonds' brilliance and sparkle are dictated by the quality of its cut. A well proportioned diamond bounces back to the eye the maximum light that enters the diamond from the table. The round brilliant diamond that is features below, and that will be the subject of this contest, is one of many shapes that exhibits 57 facets.



Clarity: a diamonds's identity

A diamonds' clarity is graded based on the number, location, size, and the type of the inclusions. The least amount of inclusions or "identifying characteristics" the greater the value of the diamond. What you see (or don't see) in a diamond reflects its value.



Color: less is more

The less color in a diamond the higher is its value. A diamond that has very little color is more brilliant simply because it allows more light to pass through it than diamonds with color.

Carat weight: on the scale

The standard unit of weight for diamonds is measured in metric carat. The size of a diamond has a significant impact on its price, since larger diamonds are more rare than smaller diamonds.

Certificate: the standard

The grading report that documents and identifies the characteristics of the diamond. Certification is the guarantee of quality for that diamond. The most important step in choosing a diamond is reviewing the diamond certificate.

Don Brutzman 5/2/05 1:19 PM
Comment: [typo: respell "standad" as "standard" in this image, otherwise reformat headings]

Contact

If candidate contestants have any questions whatsoever, please feel free to contact us at any time. We will be happy to answer all questions. As contestants proceed in their development, they are free to contact us for a preliminary review of their work. Intermediate reviews have no effect on subsequent final judging. In this way, X3D modelers can know that their understanding of diamond details is correct and that their work is moving in the proper direction.

SpaceTime3D can be contacted at the following:

Telephone: +1 (917) 968-9695

Email: spacetime3d@yahoo.com

To register for an X3D Diamond Awards Development Kit, please email your (1) name, (2) company or affiliation, (3) address, (4) city, (5) state, (6) zip code, (7) email contact and (8) telephone number.

Licensing Policy

SpaceTime3D will retain the right to display winning entries in the X3Diamond Awards on the Web as public exemplars. Other submissions are also welcome to be displayed as well. Copyright and licensing permissions for all other submitted work will remain with the authors, and can optionally be placed under Web3D open source if desired.

The content and commercial rights for First Prize and Second Prize models will be made available to SpaceTime3D and its affiliate companies for unrestricted commercial use. It is the intention of Spacetime3D to consider awarding a contract for additional services and projects to the winners or participants in the X3Diamond Awards.

Award Ceremony

The SpaceTime3D will announce the X3D Diamond Awards winner at this year's **SIGGRAPH 2005** conference in Los Angeles, California USA from 1-4 August as part of the annual Web3D Consortium members meeting. Details will be kept up-to-date at http://www.Web3D.org