Carbon DZ+

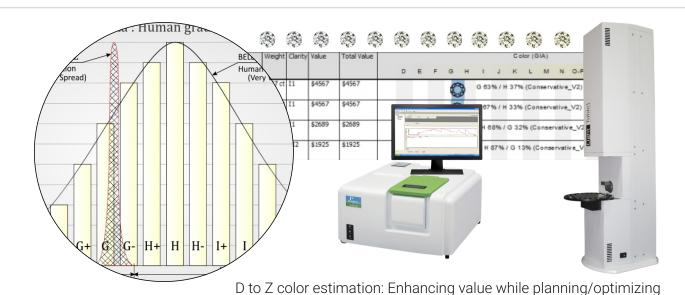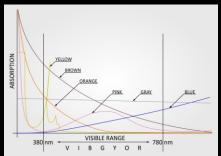D to Z color estimation: Enhancing value while planning/optimizing

Introduction

- Around 10 years back the diamond scanners were used to optimize value while exploring size (Carat) and Cut. With the introduction of Pacor and Helium Scanners, the third C, Clarity, was introduced and diamond planning scanners became more intelligent, exploiting value based on 3 Cs. The 4th C, Color though very important, was left out, as the mystery associated with it was quite unclear. Cutters used to make a rough guess and used one reference color while planning.

Myth

- There are a few myth associated with color estimation while planning.
- Fancy shape will result in a shade lower than that for round.
- Color is located in a few corners. Removing those corners will better the color as the name suggest, myths are misconception the catch here is, the diamond can be cut and polished only once. Backward learning is not possible in case of color estimation.

Technology

- Color of the polish diamond depends on,
- TAbsorption of the color, which is defined by spectrum of the rough diamond, which is unique to every piece of rough.
- The faceting style and parameters, which dictates length of ray bouncing inside the diamond before exiting from it. We have developed technology to estimate color grade of the planned solution in a rough diamond based on these information.

Which Rough Is Suitable?

- Every piece of rough which do not have color grains / color zoning is suitable for this technology. While working with heavily strong fluorescent diamonds, we need to consider that the final grade can be 2 to 3 grades better then estimated. For medium fluorescence, the grade can be 1 grade better then estimate.

What Data Is Required?

- Following data is required to make resultant color estimation:
  - (1) Final solution estimations in the rough in form of oxygen file (maximum 20 solutions).
  - (2) Spectrometer data for the rough taken thru 2 to 3 set of inline parallel windows.
  - (3) Thickness of window corresponding to these spectrometer data.
  - (4) Images of this diamond taken on light table.