ReluxVivaldi

the Radiance HDR format goes mainstream

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*** PDF version, reduced content (no live demos...) ***

PROJECT PARTNERS

ZUMTOBEL   WWW.ZUMTOBEL.COM

T-G.DE
VISUAL SOLUTIONS   WWW.T-G.DE

RELUX®
light simulation tools   WWW.RELUX.COM
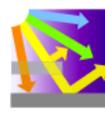
radzilla
lighting art software design   WWW.RADZILLA.DE

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TIMELINE

1988   R A D I A N C E   H D R   F O R M A T
 ...and then ?

2005   V I V A L D I   C O N C E P T   B Y   T - G
 Idea: User-friendly tool for dynamic lighting simulation based on HDR image superposition

2006   1 .   V I V A L D I   R E L E A S E   B Y   Z U M T O B E L   A N D   T - G
 Due to limited availability of suitable HDR images, the first release was equipped with
 the option to work with LDR images. This meant combining the picture with further data
 (e.g. luminance tables and/or falsecolor images) on import.

2008   R E L U X   H D R   E X P O R T   A N D   I M P O R T   I N   V I V A L D I

General Problem at that stage:
Tedious data aquisition, multiple individual calculations needed for producing sets of images separated by switching group and daylight date and time

2011   V L P   E X P O R T   R E L U X - > V I V A L D I
 Automatic switching group and multiple daylight date and time calculation in Relux
 (with Radiance/Radzilla 'rzpict') and export in combined form ('VLP format') to Vivaldi

2012   R E L U X V I V A L D I   B Y   Z U M T O B E L ,   T - G   A N D   R E L U X
 2 programs in 1:
 - automatic switching group and multiple daylight date/time calculation
 - plus the Vivaldi module for dynamic simulation & evaluation

AUTOMATED MULTIPLE CALCULATIONS

EXTERNAL VIEW:

IMPLEMENTATION SHIELDS THE USER FROM THE COMPLEXITY OF THE CALCULATION

INTERNAL VIEW:

PARALLEL PROCESSING WITH MULTIPLE RENDER PROCESSES

- allows using the ambient cache for high image quality
- optimal for widespread multicore systems with Windows OS (there is no easy way to port the UNIX type ambient file sharing to Windows)
- allows visualizing the state (on/off) in the complex luminaire model

AUTOMATED MULTIPLE CALCULATIONS

ReluxVivaldi switching group and multiple daylight calculation
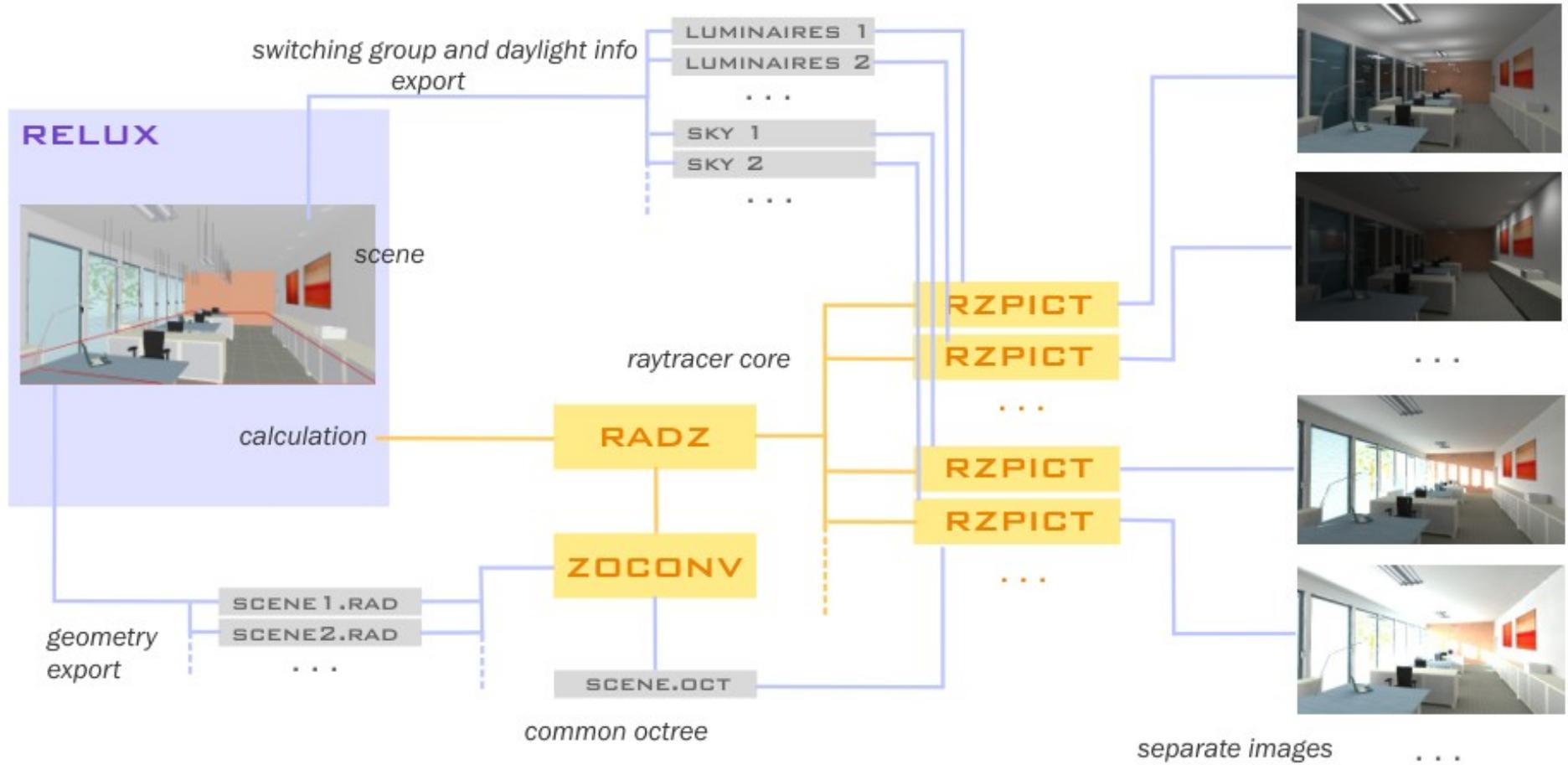
HDR and more

COMBINATION OF HDR IMAGES WITH ASSOCIATED DATA:

- luminaire product info
- power consumption, standby power
- lamp dimming characteristics
- color temperature

FLEXIBLE INTERFACE WITH USEFUL FUNCTIONS FOR THE EVERYDAY PRACTICE

- calculated energy consumption (actual/accumulated)
- timeline editing / importing / saving
- combination of switching groups
- image based lighting evaluation
- movie output

HDR and more

ReluxVivaldi screenshot

SUMMARY

EASY AND STRAIGHTFORWARD ACCESS TO DYNAMIC SIMULATION TECHNIQUES FOR ALL USERS

- no complex commandline and scripting techniques needed.
- limitations exist, e.g.no automatic detailed annual evaluations possible yet

SUITABLE FOR LIGHTING CALCULATION, VISUALIZATION AND PRESENTATION

- very intuitive approach supports creative work, but with a sound & exact basis
- allows to put more focus on lighting quality

COMBINATION OF LIGHTING ANALYSIS AND EVALUATION OF ENERGY CONSUMPTION

- 'daylight is money', linking sustainabilty with concrete economical aspects is a strong argument for promoting daylight use, esp. in the most common case of combined use of day- and artificial light

EXAMPLE OF RADIANCE IDEAS INTEGRATED IN TOOLS USED BY A WIDESPREAD GROUP OF LIGHTING DESIGNERS

THE END

THANK YOU FOR YOUR ATTENTION