BornAgain - Feature #910

Implement automatic check of python examples from users examples directory

02 Dec 2014 10:31 - pospelov

Status:	Archived	**Start date:**	02 Dec 2014
Priority:	Normal	**Due date:**	
Assignee:	pospelov	**% Done:**	0%
Category:		**Estimated time:**	0.00 hour
Target version:	Sprint 25		

Description

It has to walk through all examples contained in python/simulation directory to automatically produce *.png images.

The script will serve to two purposes.

1. During the release we can run the script to make sure that examples are not broken.

2. The *.png images produced by the script we can use to upload on our web site to reduce the amount of manual work.

> In principle, we can even ask the script to compare produced images with whose stored on website. And in the case of difference, the script will notify us that the examples section of the website needs to be updated.

History

#1 - 02 Dec 2014 13:41 - pospelov

- Description updated

- Status changed from New to Sprint

- Assignee set to pospelov

- Target version set to Sprint 25

#2 - 03 Dec 2014 18:04 - pospelov

- Status changed from Sprint to Resolved

New script is available to validate user examples.

Usage:

cd <BornAgain-source>/dev-tools/check-examples
python check_examples.py <BornAgain-source>/Examples/python/simulation

The script will create a temp directory in current working directory and generates png images for every example.
At the end it will print following table:

```
--------------------------------------------------------------------------------
Python examples summary
Directory: /home/pospelov/development/BornAgain/source/Examples/python/simulation/
--------------------------------------------------------------------------------
ex01_BasicParticles/AllFormFactorsAvailable.py                  EMPTY?
ex01_BasicParticles/CylindersAndPrisms.py                       OK
ex01_BasicParticles/CylindersInBA.py                            OK        [website differs]
ex01_BasicParticles/CylindersInDWBA.py                          OK        [website OK]
ex01_BasicParticles/CylindersWithSizeDistribution.py            FAILED
ex01_BasicParticles/RotatedPyramids.py                          OK
ex01_BasicParticles/TwoTypesOfCylindersWithSizeDistribution.py  FAILED
ex02_LayeredStructures/BuriedParticles.py                       OK
ex02_LayeredStructures/CorrelatedRoughness.py                   OK
```

```
ex03_InterferenceFunctions/ApproximationDA.py                EMPTY?
ex03_InterferenceFunctions/ApproximationLMA.py               EMPTY?
ex03_InterferenceFunctions/ApproximationSCCA.py              EMPTY?
ex03_InterferenceFunctions/CosineRipple.py                   OK        [website OK]
ex03_InterferenceFunctions/Interference1DLattice.py          OK
ex03_InterferenceFunctions/Interference2DLattice1.py         OK
ex03_InterferenceFunctions/Interference2DLattice2.py         OK
ex03_InterferenceFunctions/Interference2DLattice3.py         OK
ex03_InterferenceFunctions/Interference2DLattice4.py         FAILED
ex03_InterferenceFunctions/InterferenceParaCrystal1D.py      OK
ex03_InterferenceFunctions/InterferenceParaCrystal2D.py      OK
ex03_InterferenceFunctions/SpheresAtHexLattice.py            OK
ex03_InterferenceFunctions/TriangularRipple.py               OK
ex04_ComplexShapes/CoreShellNanoparticles.py                 OK
ex04_ComplexShapes/CustomFormFactor.py                       OK
ex04_ComplexShapes/HexagonalLatticeWithBasis.py              OK
ex04_ComplexShapes/LargeParticlesFormFactor.py               EMPTY?
ex04_ComplexShapes/MesoCrystal.py                            EMPTY?
ex05_BeamAndDetector/BeamDivergence.py                       OK
ex05_BeamAndDetector/DetectorResolutionFunction.py           OK
ex05_BeamAndDetector/OffSpecularSimulation.py                OK
```

The line

```
ex01_BasicParticles/CylindersInDWBA.py                       OK        [website OK]
```

means that example CylindersInDWBA.py has generated png image successfully and that the script on website coincide with the script from Examples.

If status of website is indicated as "website differs", than we have to manually update corresponding website example (file with script, png image, code snippet).

#3 - 30 Jan 2015 13:31 - herck

- Status changed from Resolved to Archived