# Expression Methods in ART@CMS

## MIRZIASHVILI Keti

**Georgian Technical University** 



SCCWT2016 06 October, 2016

Art@Science is cooperation of *two* different fields of activity working with
harmony

 Objective of project is expression of scientific ideas by different artistic ways





# *Two concepts* of expression:

- <u>DIRECT</u>: composition of scenes which are directly represent scientific ideas
- <u>INDIRECT</u>: expression of scientific ideas by meaning of other event having similar purpose and logic

# Direct Scenes : Example #01

CERN popular slogan:

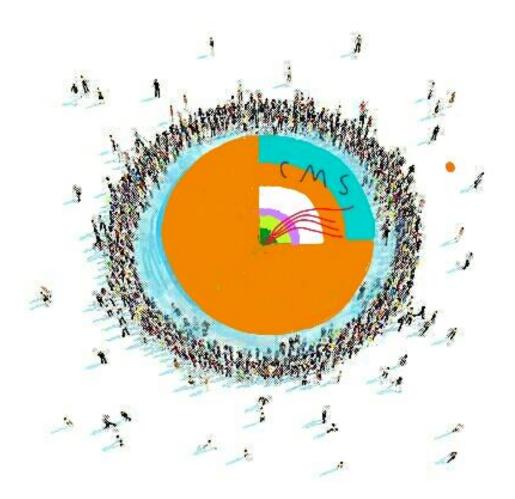
"Collaboration of different countries, institutes and peoples"



# Direct Scenes : Example #02

CERN popular slogan:

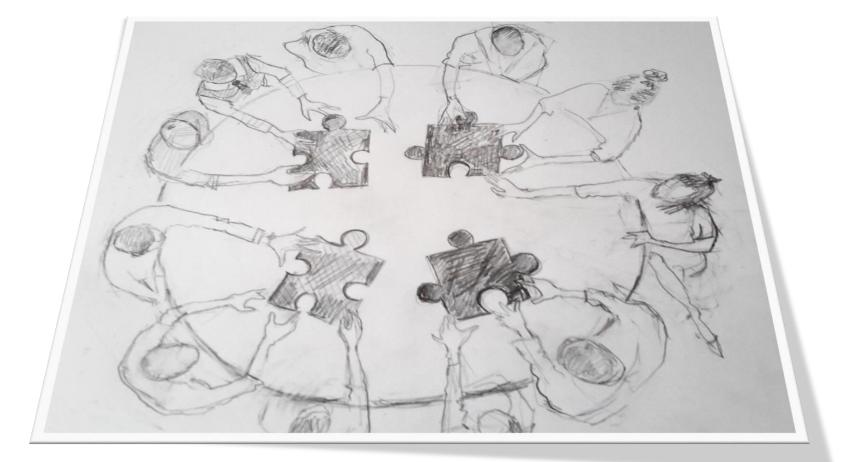
"4'800 professionals participating in CMS experiment"



# Direct Scenes : Example #03

### CERN popular slogan:

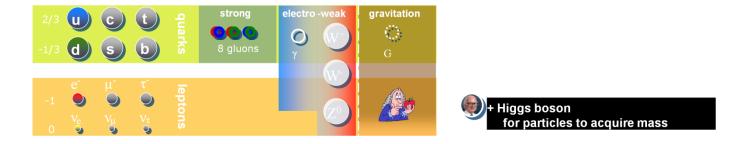
"Different teams of professionals are working together to find solution"



# Indirect expression : Example #01

CERN popular slogans:

"Discovery of Higgs Boson"; "Approve of Supersymmetry"



### 4<sup>th</sup> of July, 2012 CERN, Discovery event of Higgs boson



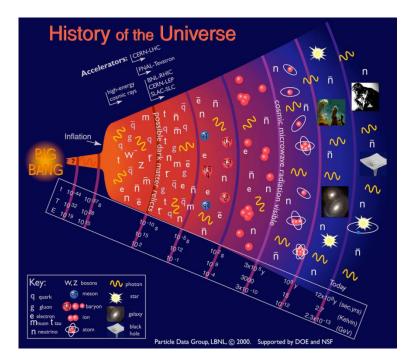
# Indirect expression : Example #01



# Indirect expression : Example #02

### CERN popular slogans:

"LHC enables watch the micro universe in 10<sup>-17</sup> centimetre"

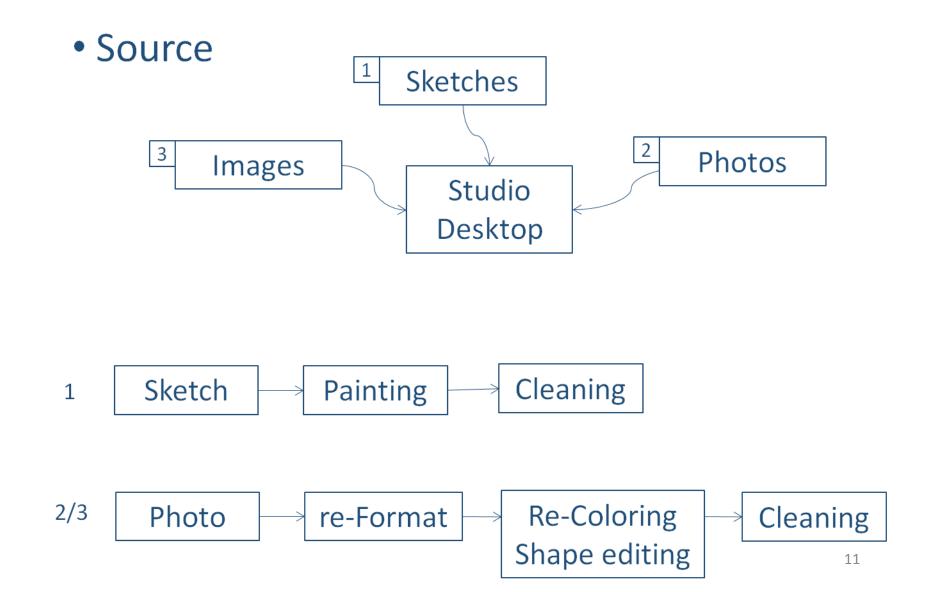




# Working Tools and Methodology

- Art scenes development connected with implementation of *two* main methodologies:
  - e-Painting
  - e-Design
  - Also various e-Painting software applications can be used





# e-Painting

# Sketch Processing

**Before Cleaning** 





# Image Processing

# Photo Processing

### Source Photo



### **Interpreted Photo**



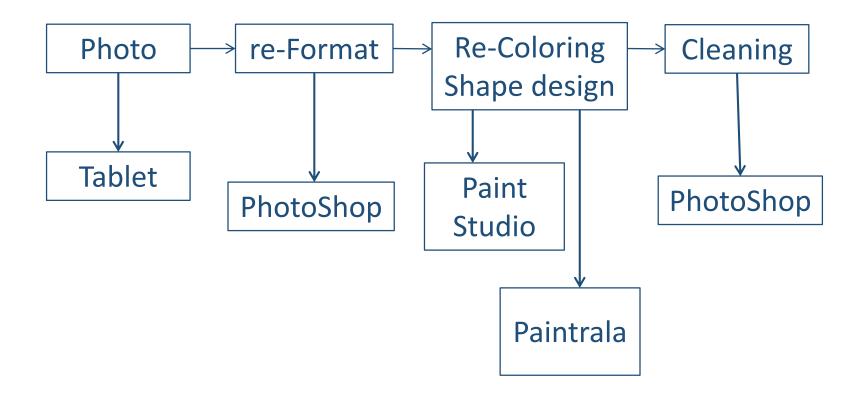
Source Image



### Interpreted Image



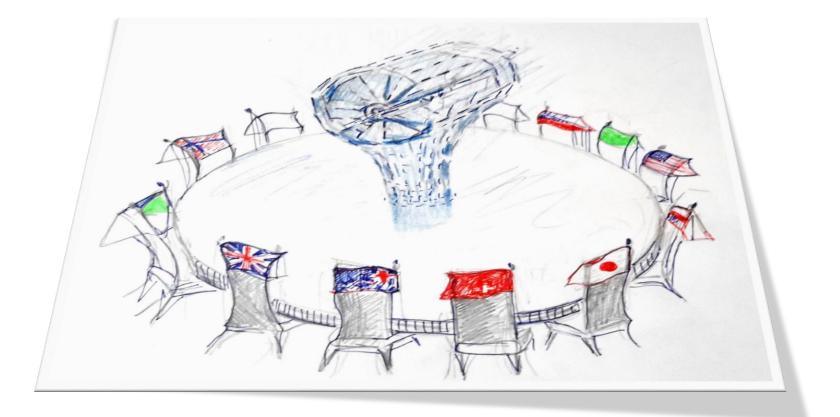
# • Tools



# 01 Composition of paper sketch

- 02 Search and Download scene elements from internet
- 03 Transforming of elements for scene
- 04 Composition of rough scene
- 05 Final composition and polishing

# 01 Paper sketch Composition



# **02** Downloading of Scene Elements (C) depositphot

# 03 Transforming of elements for scene







# 03 Transforming of elements for scene







04 Rough Scene Composition



# 05 Final composition and polishing



# 05 Final composition and polishing





# Thanks for your attention!

ketevan.mirziashvili@cern.ch