

Geometric Detail



low poly. model



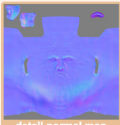
low poly. model



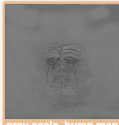
high poly. model



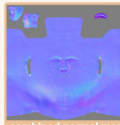
detail normal map



detail normal map



grey scale bump map



combined normal map

low polygonal head model
3.500 vertices



result

compare low and
high polygonal model
to generate
detail normal map



result

combine detail normal map
and bump map
for efficiency issues



result

Basic Skin



color map



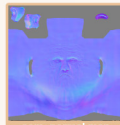
diffusion map



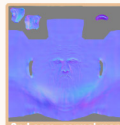
color map



2nd color map



com. normal map



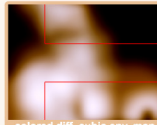
2nd com. normal map



color gradient



diffuse cubic env. map



colored diff. cubic env. map

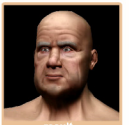


ambient occlusion



depth map

basic color and
diffuse lighting



result

backscattering effect:
saturated shadows
and less details in shadows



result

diffuse cubic
environment lighting
for complex light situations



result

self-occlusion
and shadows
to add realism



result

Specular Reflection



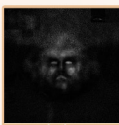
specular map



specular cubic env. map



noise map



perspiration map



perspiration c. e. map

basic specular reflection
with oiliness map
and cubic reflection map



result

perspiration with
noisy effect
and cubic reflection map



result

Subsurface Scattering and Translucency



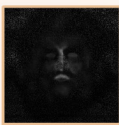
color ramp



subsurface scat. map



ears alpha map



nose alpha map



rim lighting

subsurface scattering
based on campin's
simplified equation



result

translucency masking
to redden translucent parts
as nose and ears



result

rim lighting to brighten
edges



result