



HOMETRICA CONSULTING - Dr. Nicola D'Apuzzo
Culmannstrasse 59, CH-8006 Zürich, Switzerland
Branch office: Via Collegio 28, 6612 Ascona, Switzerland
www.hometrica.ch info@hometrica.ch +41.91.7915524

FEASIBILITY STUDY:

Full Body Scanning, Virtual-Try-On, Face Scanning, Virtual-Make-Over with Application in Apparel.

Report for:
XXXXX,
XXXXXXXX

INDEX

1. INTRODUCTION	5
1.1. Primary measurement tasks and requirements	5
1.2. Project aims and issues to be analyzed	5
1.3. Organization of this study/report	6
2. METHODS AND TECHNOLOGIES	7
2.1. Full body scanning	7
2.1.1. Analysis of requirements for full body scanning	7
2.1.2. Laser scanning	9
2.1.3. White light projection	11
2.1.4. Silhouette extraction	13
2.1.5. Hybrid optical method	14
2.1.6. Radar based scanner	15
2.1.7. Digital tape measurement	17
2.1.8. Summarizing table	19
2.1.9. Considerations	19
2.1.10. Basic software	20
2.2. Software for textile and retail	21
2.2.1. Garment size selection	21
2.2.2. Made-to-measure	22
2.2.3. Virtual-try-on	23
2.2.3.1. Professional CAD/CAM solutions	23
2.2.3.2. Professional stand alone solutions	24
2.2.3.3. Non-CAD solutions	25
2.2.3.4. Web solutions	25
2.2.3.5. Comparison table	26
2.3. Special and additional interests	27
2.3.1. Measurement at home	27
2.3.2. Avatar	27
2.3.2.1. Personalization of avatar	27
2.3.2.2. Integration of real face	29
2.3.2.3. Moving 3D avatar	30
2.3.2.4. Comparison table	31
2.3.3. Modeling, digitization of clothes	31
2.3.3.1. Professional virtual-try-on solutions	31
2.3.3.2. Non-CAD virtual-try-on solutions	32
2.3.3.3. Web virtual-try-on solutions	32
2.3.3.4. Other issues	32
2.3.4. Methods for 3D face scanning	33
2.3.4.1. Laser scanning and white light projection	33
2.3.4.2. Image processing and modeling	34
2.3.4.3. Required and useful software	35
2.3.4.4. Comparison table	35
2.3.5. Virtual-make-over	36
2.3.5.1. 2D virtual-make-over	36
2.3.5.2. 3D virtual-make-over	37

3. PROJECT ISSUES	38
3.1. Complete system	38
3.1.1. Integration of different elements	38
3.1.1.1. Data acquisition	38
3.1.1.2. Data processing	39
3.1.1.3. Second party data	39
3.1.1.4. Data flow	40
3.1.1.5. Data usage	40
3.1.1.6. Summarizing table	41
3.1.2. Examples of possible complete systems	41
3.1.2.1. Complete solution	41
3.1.2.2. Partial solution	42
3.1.2.3. Partial economic solution	42
3.1.2.4. Maximal economic solution	42
3.2. Cost estimation	43
3.2.1. Complete system and a single scanning center	43
3.2.2. Effect for a single or a network of scanning centers	44
3.2.3. Effect of the weak US dollar	45
3.3. Selling to other fashion suppliers	45
3.4. MyVirtualModel case	45
3.5. Protection of concept/system	46
3.6. Business/commercial issues	46
3.6.1. Dependency on cloth suppliers	46
3.6.2. Best possible and cost effective way for success	47
4. LIST OF COMPANIES AND PRODUCTS	49
4.1. Full body scanning and face scanning	49
4.2. Virtual-try-on and cloth modeling/digitization solutions	91
4.2.1. Professional solutions, compatible with CAD/CAM	91
4.2.2. Non-CAD/CAM virtual-try-on	101
4.2.3. Other interesting solutions	103
5. FINAL REMARKS	104