Notational analysis in beach volleyball has gained in importance the last years. The development of this sport as an Olympic discipline, an annually growing world wide tournament, and millions of dollars global prize money are just some factors that required professional training and match preparation. Analyses focus on technical strengths and weaknesses of athletes as well as on individual and team tactics of opponents. This information has become essential for training recommendations by coaches. The main aspects of interest were choice of technique, frequency of actions, and quality of performance of male and female world class players. Therefore, video material was taken at the FIVB-Grand Slam in Klagenfurt in 2005. We categorised 15 matches with 7393 actions from the women's tournament and 14 matches including 7776 actions from men's tournament. Analyses were carried out with Statshot®, a commercially available annotation software. The heart of the program is a database that organises the annotations which are previously imported in a statistic panel by mouse click. Thus, the annotations are connected to the related video scenes (see Tilp et al., 2006). Especially trainers and athletes may take advantage of the videos scenes when they use statistics for feedback training or as competition preparation. For this study MS Excel® and Chi-square tests were used to handle data and identify differences in playing behaviour of men and women.

Results reveal that men prefer hard attacks (59%) to shots (41%). For women the percentage is nearly balanced. Both sexes used cross-court attacks and line shots most frequently. Registration of attacking zones discovered tendencies to perform attacks from a position near the side line. Men achieve slightly more direct points with their attack but make also more faults than women. Besides quality significant gender specific differences (Chi-square test; p<0.01) were observed in choice of attacking technique, direction and blocking strategies. While men stay in the majority of cases (90%) at the net and choose the shot block or an aggressive block technique every fourth block by women is "faked". That means that the blocker leaves the net and the team tries to defend the attack from the inside of the court. Two third of these fake blocks led to a successful defence or to a good ready position.

The outcome of our investigation gives athletes an overview about which technical skills are required to establish on international tournaments. To get more information about the physiological situation and requirements (jumps, sprints, running paths, etc) we intend to apply computer vision methods in future. Automatic tracking of players during competition should generate the requested data.