

The professional basic experimental course is opened after the student has some theoretical and practical basis. To pay attention to the training of the design of experiments and development ability is helpful students to promote the ability of presenting and solving the question, and sense of accomplishment, to further stimulate their enthusiasm of autonomous learning and innovation design, to promote exchanging knowledge and cooperation between teachers and students, between students and students. In the meanwhile, it is also helpful to cultivate innovation ability and team spirit of the students. In the professional basic experiment course, according to the characteristics of mechanical discipline, the simulation and virtual experimental form can be used to rich experiment content, and improve the students' enthusiasm. For example, the structure of the machine, CNC processing, etc. Because other means do not vivid enough, the virtual reality technology can be used to make students manipulate machine and machining tools virtually, etc. This kind of experiment course mainly covers as follows, mechanical design, mechanical principle, mechanical manufacturing, hydraulic and pneumatic transmission, etc.

VERICUT is professional virtual CNC processing software developed by CGTECH Company. Different from general CAM software which only simulates the tool path or intermediate file, VERICUT can not only simulate CNC machining terminal code (G code), but also realize virtual visualization such as physical machine, fixture, tools, blank, which included in complete processing environment. VERICUT for virtual machining system diagram is shown as Figure 4.

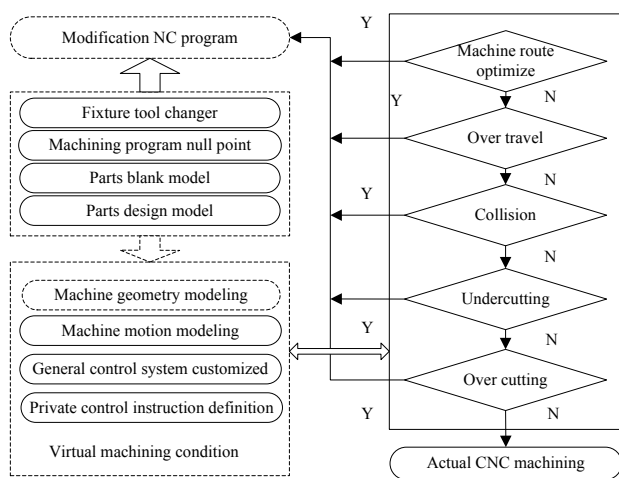


Fig. 4. Virtual Machining System Diagrams

C. Remote Control Experiment Used in Professional Experimental Course

Professional experimental course which is based on the basic experiment and professional basic experiment has comprehensive training on higher levels of exploration and practice to make the students entered into the scientific research and production practice as soon as possible. Professional experiments courses use remote control experiment, to make the student consolidate and develop the knowledge which has been mastered in, carry out the experiment of new technology, new method and new means, and constantly improve the students ability and integrated quality from participating in the scientific research in the open the experimental environment.⁵

5. Conclusions

Faultless teaching mode which is the foundation of promoting the rapid development of network education, makes use of multimedia courseware, the computer simulation, the virtual technology, to construct network experimental teaching platform, and solve the problems of the resources and the practice learning of the modern distance education mechanical experiment teaching. At present, the network experiment technology is still in the initial stage, there are many practical problems to be solved. Under the guidance of the principle of higher education machinery network experiment teaching, improving and developing network experiment teaching resources, and building up the system of network experimental teaching, could adapt to the needs of constantly development of the modern distance education. Deepening reform of the experimental teaching system is still a long-term and arduous task. And the next step, it is important to further explore and improve the construction of experimental teaching system combining with the characteristics of the distance education and student's actual situation.

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