SIMON FRASER UNIVERSITY

MEMORANDUM

To: Senate

From: Senate Committee on
Undergraduate Studies
Senate Committee on
Academic Planning

Subject: School of Computing Science –
Proposed Undergraduate
Enrolment Quota

Date: December 12, 1985

Action undertaken by the Senate Committee on Undergraduate Studies at its meeting of December 10, 1985 and by the Senate Committee on Academic Planning at its meeting of December 11, 1985, gives rise to the following motion:

MOTION:

"That Senate approve and recommend approval to the Board of Governors, as set forth in S.86-12, the proposed undergraduate enrollment quota in the School of Computing Science."

SIMON FRASER UNIVERSITY
MEMORANDUM

To...... Mr. R. Heath, Registrar and Secretary
to the Senate Committee on Undergrad-
uate Studies.

Subject...Undergraduate. Enrollment. Quota,.......
ASU. 85-7.   Computing Science.

From....J..Blanchet,.Administrative. Assistant,
Faculty of Applied Sciences.

Date.... December 10/85.

At a meeting of the Faculty of Applied Sciences Undergraduate
Studies Committee held on Tuesday, December 10/85 members of the committee
approved the above-noted submissions from the School of Computing Science.

Would you please place these items on the agenda of the
Senate Committee on Undergraduate Studies for consideration.

Attachments.

Proposal

Undergraduate Enrollment Quota

School of Computing Science

Background:

For many years, Computing Science has been under heavy enrollment pressure. The demand for enrollments into Computing Science courses has consistently grown at a faster pace than the resources available. Since 1982, we have required students applying for admission to our Honors and Major programs, to achieve a minimum level of CGPA for the first two years of their program. Recently, a quota was introduced to restrict the percentage of visa students in our program. Despite these measures, our problem of chronic shortage of resources does not appear to have been resolved.

First of all, the number of declared computing science students continues to increase. The last summer semester (85-2), alone, saw an increase of 100 in the number of declared Computing Science Majors. According to all available statistical enrollment data regarding lower division course offerings in the last two years, it is highly unlikely that this trend will be reversed in the near future. On the other hand, our faculty complement has suffered a net decrease during the last 3 years. To cope with the ever increasing demand, we decided to increase the number of course offerings with the help of sessional instructors while, at the same time, to petition the University for additional resources. As a result, the number of courses taught by non-faculty is disturbingly high. This number in percentage has increased to 53% of all course offerings at the undergraduate level. The quality of undergraduate teaching will definitely suffer if this number is maintained for much longer. Finding qualified sessional lecturers to teach upper division courses is becoming increasingly difficult and time consuming. At the same time, it impedes good planning to depend on "soft money" to provide for a substantial part of the regular teaching services.

Proposal:

The School of Computing Science proposes that restrictions be imposed on the number of undergraduate students granted entry to Computing Science Honors, Major, and Minor programs, Management & Systems Science program, the Mathematics/Computing Joint Honors Program, and the Digital System Design Honors Program. The exact numbers may vary each year as resources permit. We also request that the latest version of our regulation on enrollment limitations which was approved by Senate on December 2nd be amended as shown in Appendix I, to reflect our proposed implementation of these restrictions.

Other Options:

We have explored several other options to solve our enrollment problems and found them infeasible, unacceptable and/or inadequate as follows:

(1) Acquiring more resources: Our view here is that the University will satisfy our needs.

(2) Reducing course offerings: We are going to cut back our course offerings to match the resources available to us. This by itself is inadequate, however, because it is unfair to accept students into our programs without the expectation of program completion within a reasonable time.

(3) Raising the entry requirements: This is an awkward and inaccurate way to impose enrollment restrictions. Besides, it has not worked well in the past for us or Business Administration.

(4) Increasing class sizes: All of our upper division courses have class size limits. Lab courses, which are not only central to our curriculum but also to that of Engineering Science, have yet smaller class sizes due to equipment and space limitations. Even so, our average class size for the upper division courses is 30 which compares favorably with the university's average in 82-3 of 26 and 14, respectively, for 300 and 400 level courses. This average class size is bound to increase when we cut back our course offerings, as the students will have fewer courses to choose from. It might be possible to further increase

class size of some courses with additional TA help; however, the School finds
it difficult to satisfy its TA requirements with qualified individuals even
now. Without such help, increased class sizes will be detrimental to the quality
of our programs and may well result in the loss of hard-to-replace faculty.

Admission Procedures:

1. Each semester, the School establishes a quota which determines the number of Major-equivalent students that can be accepted into the computing science program family (Computing Science Minor/Major/Honors and other joint programs). Applications for entry to our program will be accepted during the first five days of classes each semester.

2. Acceptance of a student into any Computing Science program will be based both on overall academic performance as measured by the CGPA, and on specific academic performance in computing-related material as measured by the Computing-Related Grade Point Average for Declaration in the given program. The CGPA is calculated based on all course work completed at SFU as described in the **General Regulations** section of the calendar. The Computing-Related GPA for a given program is the grade point average calculated over all courses used to satisfy the lower division course requirements of that program and any other Computing Science courses taken. Only courses taken at SFU are used in these calculations.

3. A student may apply for formal acceptance as a declared student in any one of these programs involving Computing Science upon completion of 57 semester hours including the lower division course requirements for the program. For direct admission, based on CGPA and on Computing-Related GPA, the student must have completed at least 12 semester hours of computing-related courses at SFU.

4. After the closing date for admission each semester, the School will determine an Admission GPA for the semester based on the number of places available and subject to the Dean's approval. Every applicant for a Computing program whose CGPA and Computing-Related GPA for the program are both greater than or equal to the Admission GPA will be admitted; no admission to a program will be granted to any applicant

who has either a CGPA or a Computing-Related GPA for the program which is less than the Admission GPA for the semester.

5. A transfer or second-degree student who has not completed at least 12 credits of computing-related courses for a program, but who has at least 57 semester hours of overall credit and has the credit for all the lower division requirements of a program may apply to the School for special admission consideration based on transcripts from other post-secondary institutions.

6. The applicant will be notified toward the end of the first month of the semester whether or not his/her application has been accepted.

7. The applicant has the right to appeal to the Director of Undergraduate Programs regarding the decision on his/her application.

8. Grandfather clause: students completing more than half of their lower division required courses for CMPT by the time this change becomes effective will be able to declare either with a CGPA of 2.6 or with a CGPA of 2.5 and a GPA of 2.5 in the lower division required courses for Computing.

Impact on Other Programs:

1. **Engineering Science:** This is probably the only significant discipline which will be affected by this proposal. Negotiation with the Director of the School of Engineering Science is underway to determine the number of engineering students that will be enrolled in Computing Science upper division courses each year. This proposal, undoubtedly, will restrict the number of students the School of Computing Science can accept into some streams of their programs (e.g. Computer Engineering). We argue that this proposal will eliminate an uncertainty in their program planning and reduce possible conflicts between the two schools.

2. **Other Related Programs:** These include Applied Physics, Management Science & Systems Science (MSSC), and Cognitive Science which require upper division courses in computing science. MSSC is considered an equivalent to a minor in computing science for the purpose of enrollment, and is a part of the computing science program family. The rest of the programs are not high enrollment programs and require

only a few computing science courses. There should not be any problems in accommodating students in these programs.

3. **Other Disciplines:** Students in other desciplines will benefit from the proposal. We are committed, philosophically, to the principle of computer literacy on campus. There will be no enrollment limitation to our lower division courses. Furthermore, we encourage students regardless of their majors to take our lower division courses because we believe all students who are serious about programming should be exposed to the same programming techniques as our majors. They may be awarded a certificate of computer programming, the details of which will be worked out at a later date. We are also seriously considering the possibility of reserving a certain percentage of spaces in each upper division course for open competition for students from all disciplines. Thus, a highly qualified non-Computing Science major/minor may be given an opportunity to take any of our upper division courses, although it is doubtful, in practice, that there will be many of them taking advantage of this option. (According to the data from the Office of Analytical Studies, 80% of the course spaces in 84-3 were taken up by CMPT majors. We suspect many of the remaining 20% were taken up by CMPT minors or Engineering students).

APPENDIX 1

**Revised regulation as approved by
Senate on December 2nd, 1985:**

Proposed:

Enrolment Limitations

The School of Computing Science limits admission to the upper division of its Major, Minor and Honors programs and to related joint programs. Space in upper division Computing Science courses are primarily reserved for students who have been formally accepted into such a program; only such students will be generally able to obtain the upper division courses necessary to complete the program.

Acceptance of a student into any Computing Science program will be based both on overall academic performance as measured by the Cumulative Grade Point Average (CGPA) and on specific academic performance in computing-related material as measured by the Computing-Related Grade Point Average for Declaration in the given program. The CGPA is calculated based on all course work completed at SFU as described in the General Regulations section of this calendar. The Computing-Related GPA for a given program is the grade point average calculated over all courses used to satisfy the lower division course requirements of that program and any other Computing Science courses taken. Only courses taken at SFU are used in these calculations.

A student may apply for formal acceptance as a declared student in any one of these programs involving Computing Science upon completion of 57 semester hours including the lower division course requirements for the program. For direct admission based on CGPA and on Computing-Related GPA the student must have completed at least 12 semester hours of the computing-related courses at SFU. Students having both a CGPA and a Computing-Related GPA of 2.5 or higher will be accepted into the School's programs regardless of the total number of applications; students below 2.25 will not be accepted under any circumstances.

A transfer or second-degree student who has not completed at least 12 credits of computing-related courses for a program, but who has at least 57 semester hours of overall credit and has the credit for all the lower division requirements of a program may apply to the School for special admission consideration based on transcripts from other post-secondary institutions.

To remain in a program in Computing Science a student will be expected to maintain at least the minimum CGPA of 2.25.

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The School will admit a limited number of students into its programs each semester. After the closing date for admissions each semester, the School will determine an Admission GPA for the semester based on the number of places available and subject to the Dean's approval. Every applicant for a Computing program whose CGPA and Computing-Related GPA for the program are both greater than or equal to the Admission GPA will be admitted; no admission to a program will be granted to any applicant who has either a CGPA or a Computing-Related GPA for the program which is less than the Admission GPA for the semester.

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