# COMP90007 Internet Technologies, Project 2
Semester 2, 2021

**Due Date: October 20, 2021 (Thursday) 5:00 PM (Melbourne Time)**

## 1. Introduction

This project forms 15% of your final mark. The project is about creating a short survey on a contemporary topic in networking that we give as below. This is a cornerstone activity that we would like you to learn about for your continuing development. In our sector, this is an activity you would need to do by yourselves regularly to keep up to date with developments.

**The main outcome of this project is a short report.** Detailed report formatting instructions are found at the end of this project description (in Project Administration Section).

For this project, you need to write a **brief survey** on: **Virtual Private Networks**. This is a hot area in computer communications that will be good to get an overview of as well as practicing writing a survey report.

**Project Requirements:**

As expected from any survey, students are expected to not only list top papers in an area but also categorize these developments/approaches and compare/critique them. This is at the core of the survey. A list of papers with comments only is called an "annotated bibliography" and is not a survey and is not the purpose of this project. Students should identify the key issues and design decisions that relevant to the topic and use these to structure their project report.

As this is a simple survey, we do not expect you to learn every paper in detail and be overly comprehensive about the topic but rather cover the key papers, classifications/parameters.

Students may complete this project **either on their own or in team of two**. For students that complete this on their own, we expect that students should have looked at and cited at least **5** papers not including other surveys on this topic. Reading more papers are better but in general there are diminishing returns at a certain point. Students who complete this in a team should cite at least **8** papers. References should be in **Harvard, APA or IEEE** format. Teams are expected to contribute equally to the report and thus, both members will get the same marks. Any instances of unequal work reported to us will be reviewed carefully and necessary adjustments may be made.

**All reports should include the name(s), username(s) and student ID(s) of the student(s) who contributed to the report.** If you complete this work as a team, you should nominate one team member to submit the report.

**Following report section-headings and length of each section are highly recommended:**

- Introduction to the Topic (1 page)
- Related Work (3 pages (single student) or 5 pages (team))
- Comparison of Key Approaches (benefits and disadvantages) (1 page (single student) or 2 pages (team))
- Conclusions and Future Directions (1 page)
- References (1 page)

**General Guidelines:**

You should initially start reading Wikipedia articles, news, and similar webpages to get high level idea for what Virtual Private Networks are. Then you should use scholar.google.com or similar scholarly publication search engines for performing a more detailed background search and do further reading. It is important to note that if you login to our library with your student credentials, you will be able to access papers that are returned by these engines for free of charge in most cases.

The topic we have chosen is something you would already be partially familiar with some of the algorithms you have already seen earlier in the semester. The project is expected to be completed in 3-4 weeks in total. The stages of your project can be summarized as: Background search/reading selected papers (should not take more than 10 days and can be done in 1 week), organization of your report/drafting key points of your sections (1 week), finishing your report (1 week). After this exercise, students are expected to have a good idea in the topic.

**Note:** Using pure google.com is a good start but will most likely land you on more general news items again and again than recent research and developments and proper articles. You are encouraged to find other survey papers that already exist in these topics. Find one that is recent and relevant. Better, find many and you will see authors look at similar but not the same set of algorithms/protocols. They may also have different classifications. These should give you an idea on what common/popular methods exist and what key comparison parameters you can have between solutions. They are also a good example on how to write surveys. You cannot use other surveys or a book as a sole source for your survey and/or directly take their approach. You should also refer to individual key papers mentioned in the surveys and read them and make your own judgements and categorizations (although many of the categories you create could be similar to other survey papers in the area.) The number of citations a paper gets in scholar.google.com is an indicator about its leadership in the field, i.e., beyond the fact that it is cited in other surveys.

When reading the papers, please note that a technical paper is not read like a novel, i.e., not read from cover to cover sequentially, but is read in a manner that you can quickly grasp the key ideas, benefits/disadvantages. In particular to write a survey this is enough. At implementation time, technical papers could be read to the very extreme detail.

## 2. Project Administration

The deadline for the report is specified at the start of this document. Late submissions will get a penalty of 10% per day, similar to the previous assignments and projects. The report must be submitted as a PDF file on LMS. At the top of your report before the introduction, you should include a proper title for the survey and your name(s), student ID(s) and login username(s).

The report should be in A4 size paper in 12-point Times New Roman for the main text with 1.5 line spacing with 1-inch margins. It should be single column. The report should not exceed 10 pages, including all figures, appendices and references etc. The main text of the report, without figures etc., is expected to be not less than 4 pages as well, and thus putting many figures one after the other is not an acceptable report.

**All explanations should be your own words and proper citations should be used when needed.** The project is to be completed by individuals or teams of two. Students/Teams should work independently of each other on this project. You should not share information about papers you found with students outside your team. This is important because finding is a part of this experience.

The marking criteria for this project is as follows:

- Format and structure of the report (2 points)
- Coverage of the survey regarding papers read (4 points)
- Description of the individual papers in report (4 points)

- Categorization and comparison of papers/approaches (3 points)
- Future directions and concluding discussions (2 points)

A couple of useful links for report writing are below as reference:

https://students.unimelb.edu.au/academic-skills/explore-our-resources/report-writing/reviewing-the-literature
https://students.unimelb.edu.au/academic-skills/explore-our-resources/report-writing/technical-report-writing
https://library.unimelb.edu.au/recite