

# COMP90007 Internet Technologies, Project 2

Semester 2, 2019

Due Date: Friday Oct 25, 11:30am

## 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.

As first order of business, for this project we have decided that you need to **write a brief survey on: RFID anti-collision protocols**. 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.

You should initially start reading Wikipedia articles, news, and similar webpages to get high-level idea for what RFID is. 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. 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. There would be many. Find one that is recent. 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 to write their own surveys as a sole source 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.)

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 biblio” and is not a survey and is not the purpose of this project.

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. 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.

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, we suggest you to do this during the break), 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. The topic we have chosen is something you would already be partially familiar with through 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.

Following **report section-headings are highly recommended:**

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

We expect that at a very **minimum students should have looked at and cited about 5 papers not including other surveys** for their report. Reading more papers are better but in general there are diminishing returns at a certain point... Given the topic, the number above is adequate!

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 which is the sole output of this project 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 via Turnitin** on LMS which will be available before the deadline. Please include a proper title for the survey and your name, student id and login user name as well, i.e., just before the introduction section starts.

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 an individual project.** Students should work independently of each other on this project. Not sharing information about papers you found is also important as 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)