

CSC4200/5200 – COMPUTER NETWORKING

Welcome and Introduction

Instructor: Susmit Shannigrahi
sshannigrahi@tntech.edu

Welcome

- Class website: <https://tinyurl.com/CSC4200>
- Syllabus
 - Grading policies
 - Homework and assignments

Instructor: Susmit Shannigrahi

- Office hours: Monday 9-10AM, Tuesday 9-10AM
- Email : sshannigrahi@tntech.edu

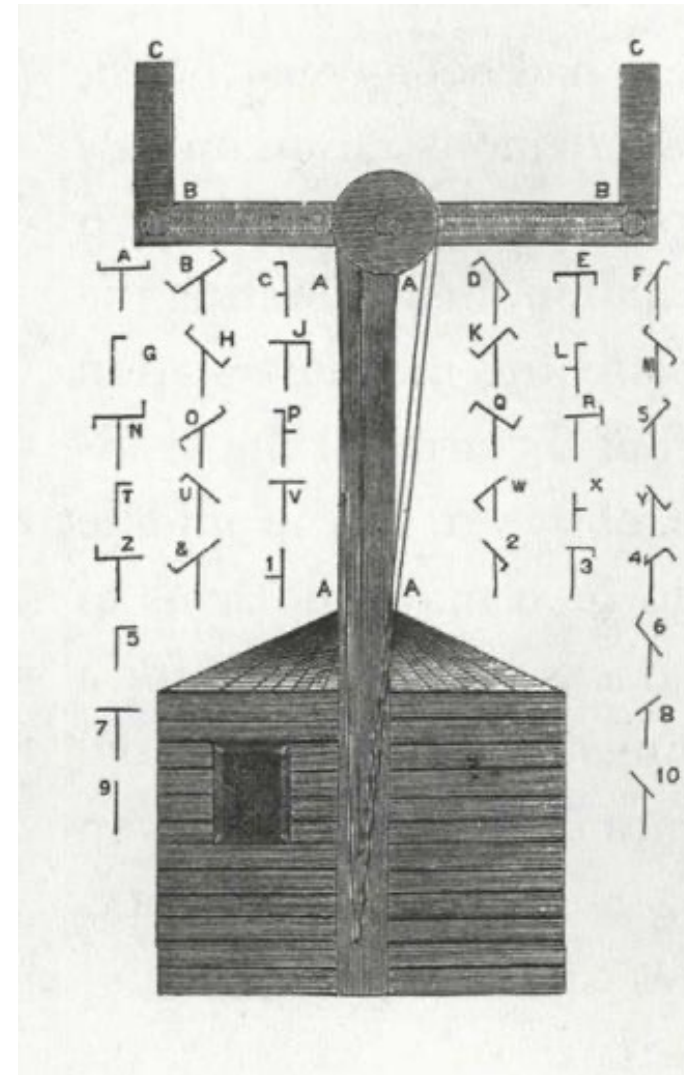
GTA: Sahaya Jestus Lazer

- Office hours –9-10AM Tuesday, 3:15-4:15 Thursday
- Email: slazer42@tntech.edu

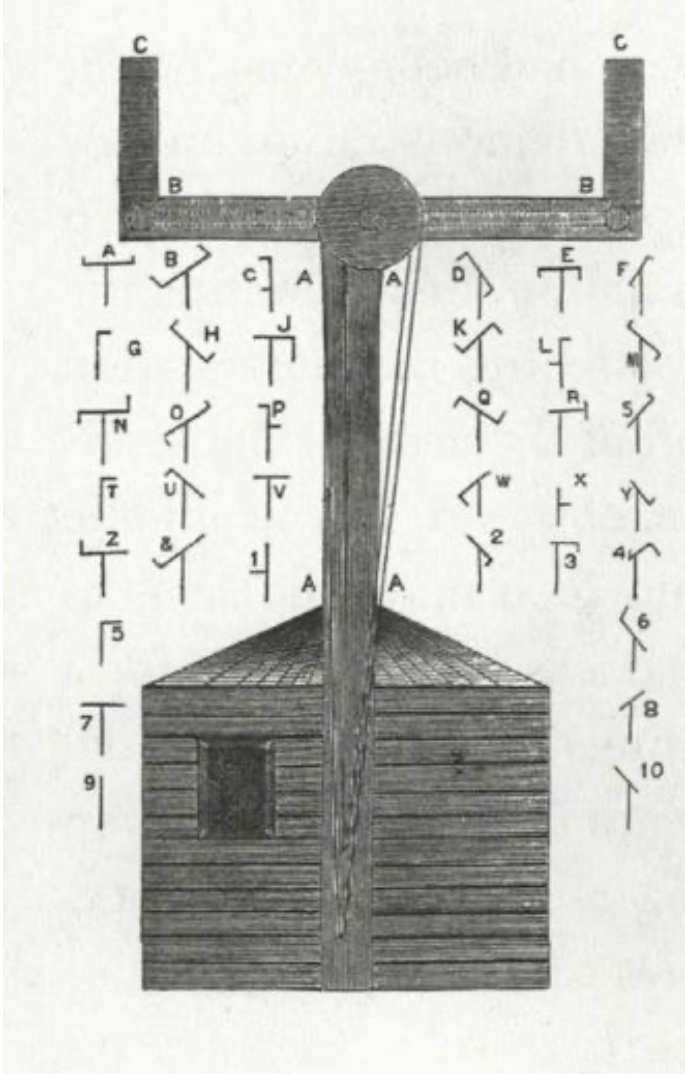
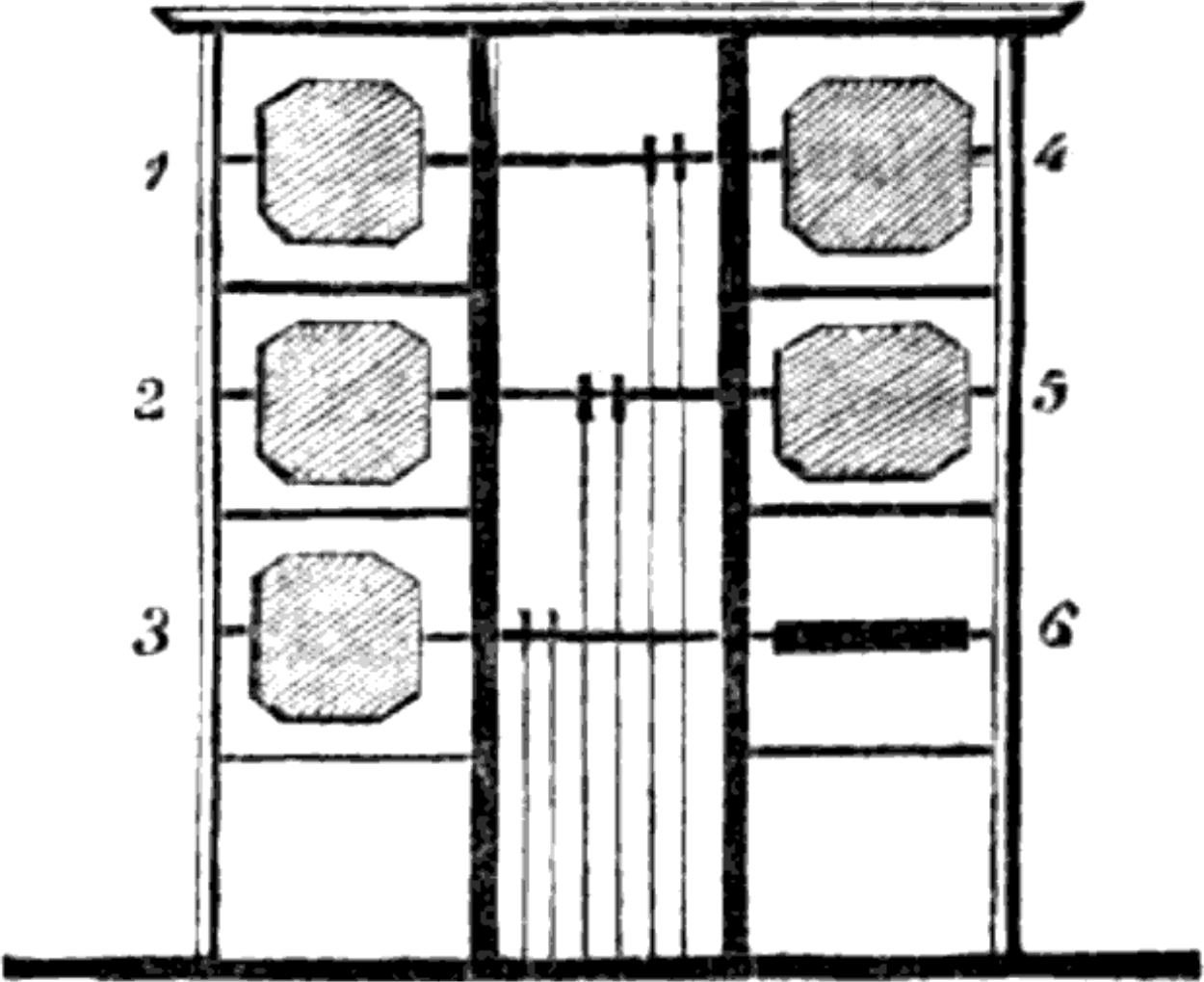
The Mother of All Networks



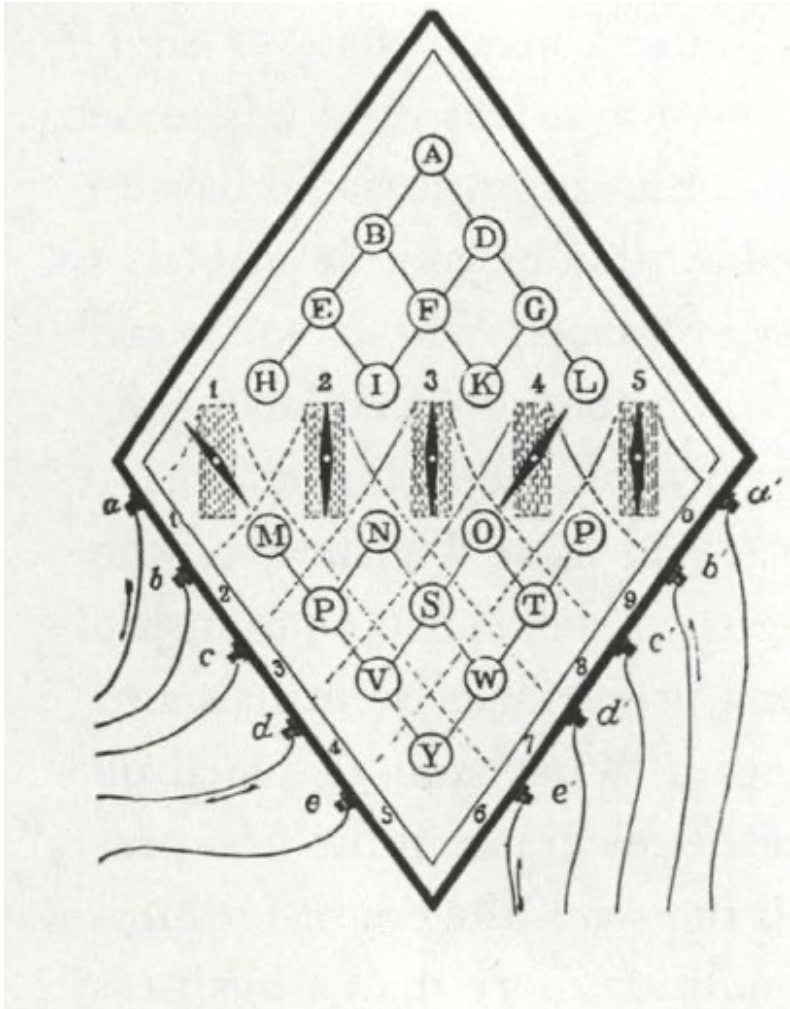
The Optical Telegraph



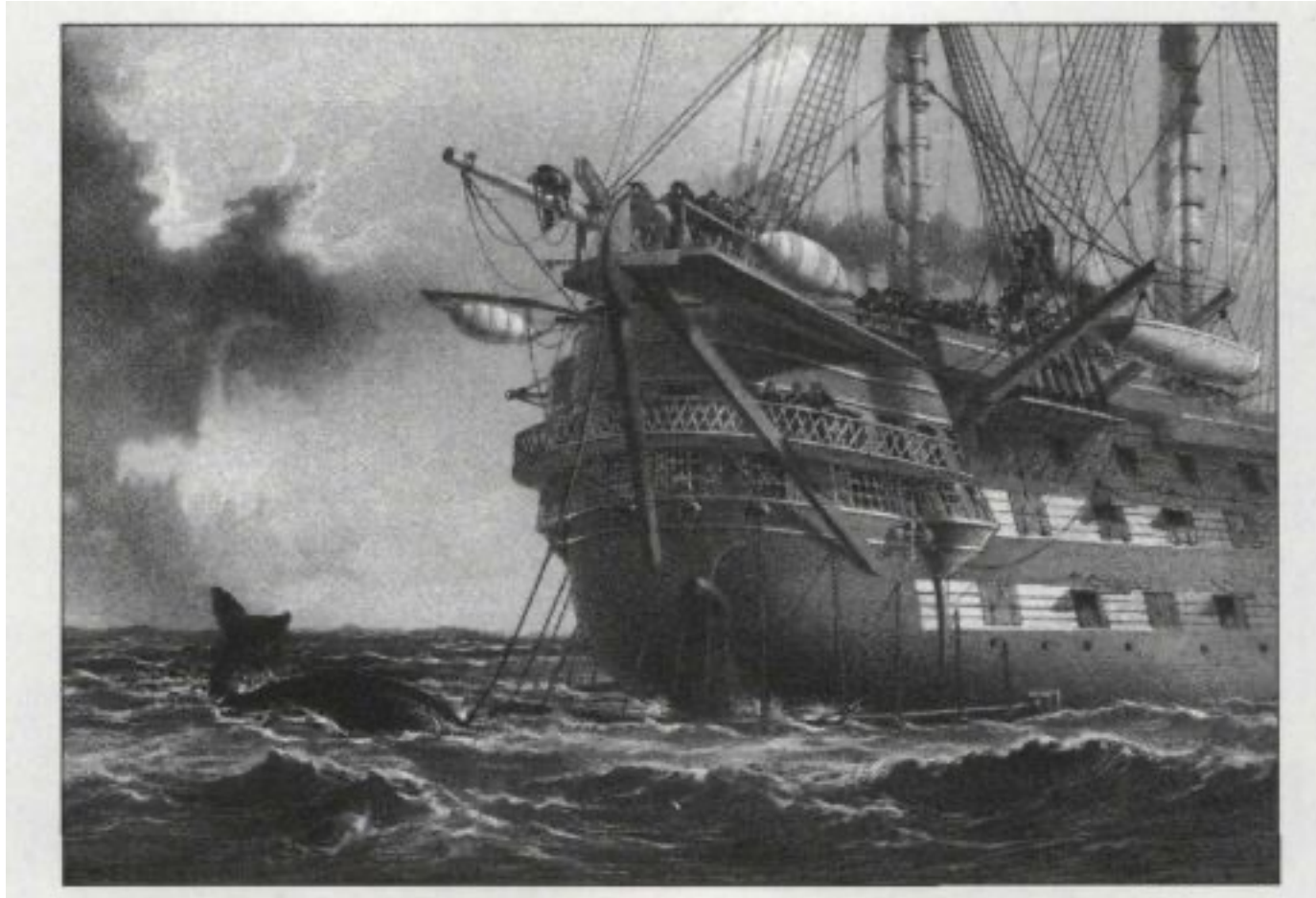
The Optical Telegraph



The Electric Telegraph

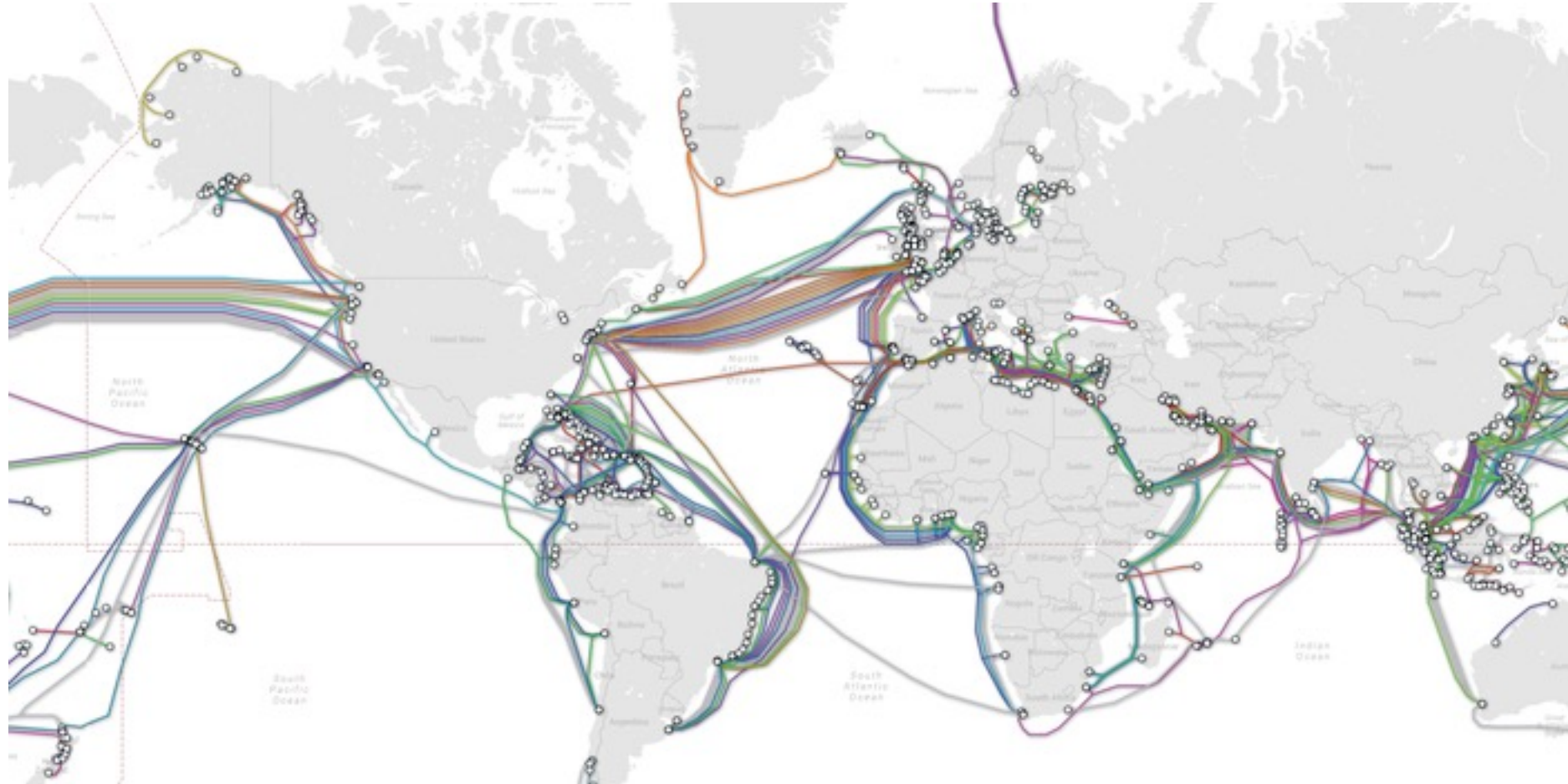


Connecting the World



HMS *Agamemnon* encounters a whale during the laying of the first transatlantic cable, July 1858.

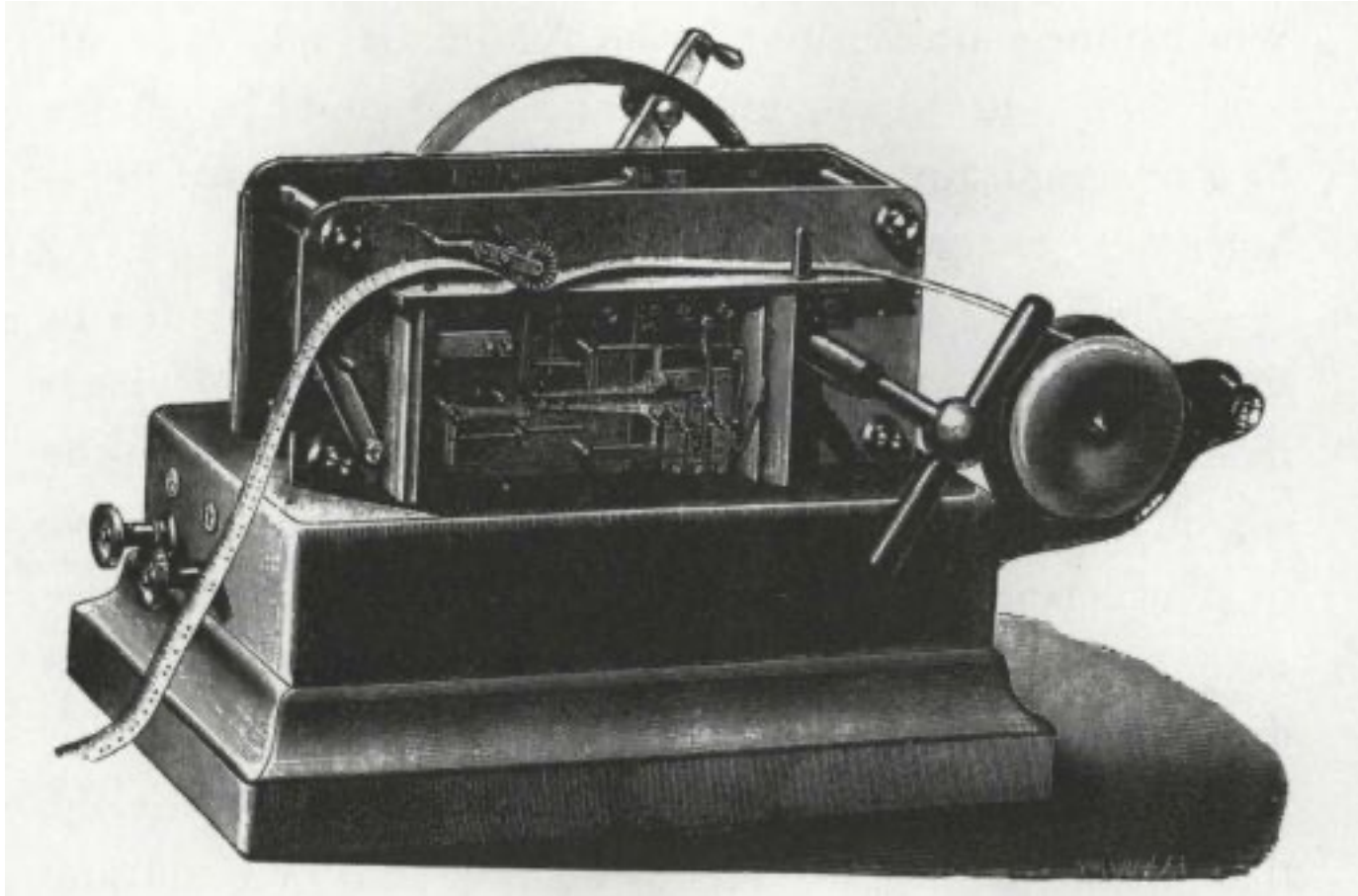
Transoceanic Cables Today



Hackers and Gamers

YOUR LUGGAGE AND TARTAN WILL BE SAFE BY THE NEXT TRAIN.

Wheatstone Automatic transmitter



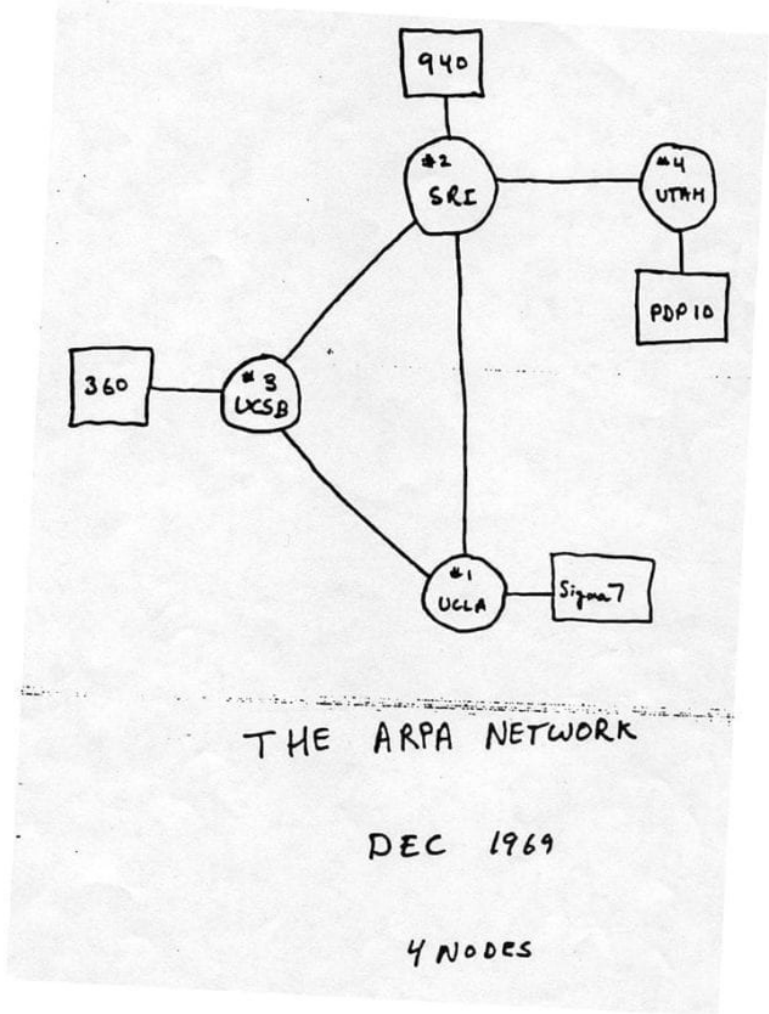
Messages were prepunched on a paper tape and then transmitted in Morse code at very high speed as the tape was fed through the machine.

Punch Card Computers

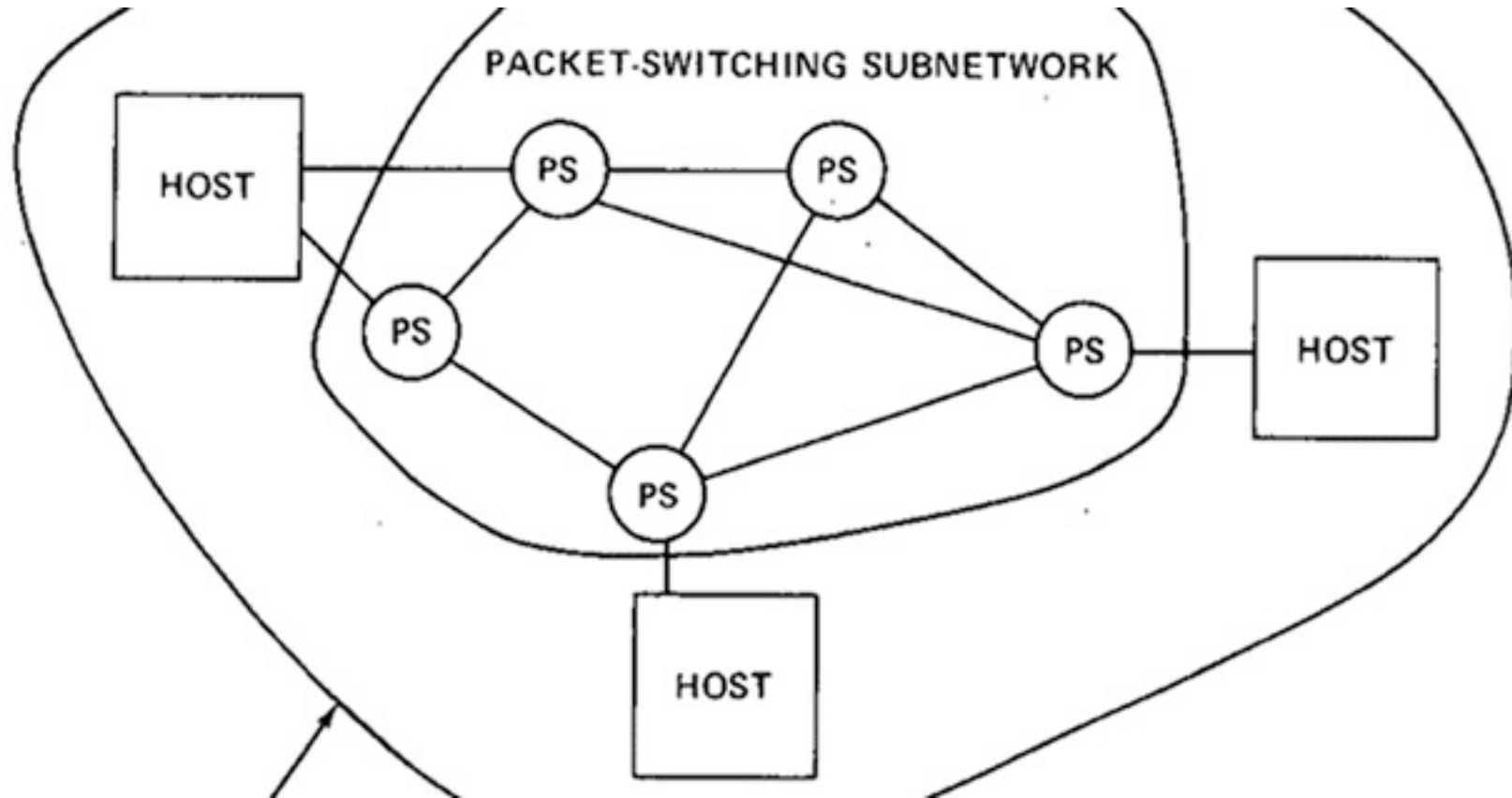


Punched card computers

The ARPA Network



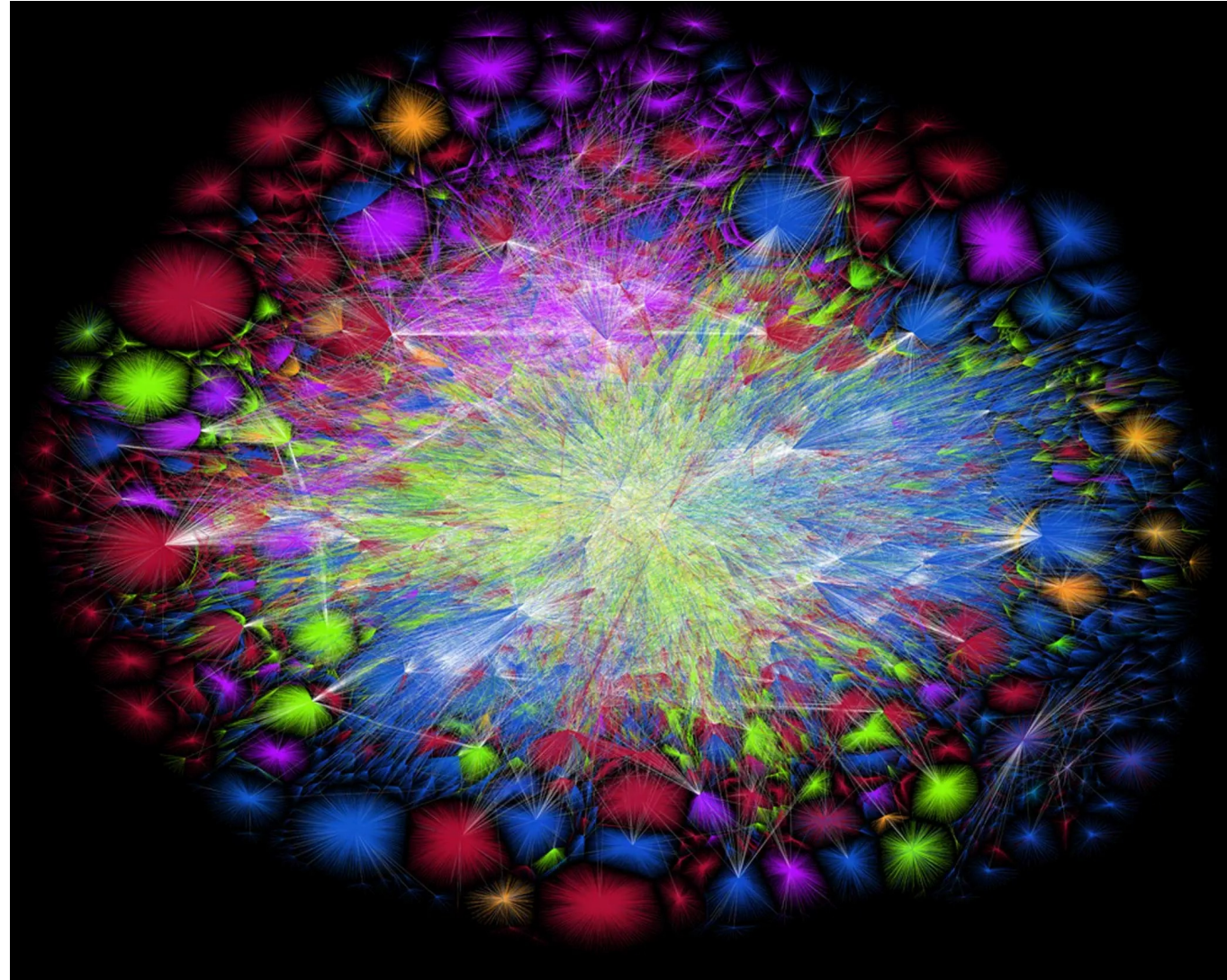
Packet Switching



Personal Computers



Current Internet



Current Internet's Evolution

<https://www.youtube.com/watch?v=DdaElt6oP6w>

Social Contract

<https://tinyurl.com/csc4200-mural>

Grading

- Class exams on each broad area – 20%
 - Every 2 weeks or so (~5 exams)
- Projects + Demo – 35%
- Approximately 5 projects with increasing difficulty
 - You will set up meetings with the TA to go over your code
- 3 exams – 35%
 - **approximately once every month (September, October, November) – 35%**
 - **No Midterm/ Final**
- Class participation – 10%
 - **Participate in breakout sessions and discussions.**
 - **Class is not easy – you will not do well if you don't participate.**

CSC5200

- Extra reading and writing assignments

Expectations from You

- Be communicative – if you need help, please ask
- Get started on the assignments sooner – they will take time
- This class is not easy!
 - Especially you haven't learned the background material so far
- Need to work **outside class hours**
 - For every hour of lecture, you need to spend about 2 hours to study
- Each lecture will have reading material

Policies etc.

See below.

Policies

- ChatGPT/CoPilot
- You may use it but must disclose it.
- Need to be able to explain your code/algorithm/protocol

- One late submission allowed (programming assignment), no questions asked. Homeworks are due on time.
 - Use it wisely
 - Max 7 days late
 - Submit to iLearn

- Other late submissions
 - Flat 50% deducted

- No make-up exams.
 - Your responsibility to find conflicts and work with the instructor to resolve them

- **No cheating or plagiarism – Coding and/exams**
 - **You will fail the class**

Exams

- 3 exams.
- **Open book**
 - **Will be challenging**
 - Memorizing will not help, you need to understand the topics

Programming Assignments

- Need to run on Google Cloud VMs – Ubuntu-20.10 or newer
- Individual/Group assignments
 - We will learn how to break complex problems into smaller ones and divide tasks
- C/C++/Python
 - **If you want to use other languages, that's okay**
 - **Talk to the GTA/Instructor first**

Logistics

- Slides and recordings will be posted on the class website in the evening
- Use the Teams channel to discuss, reach me or the TA