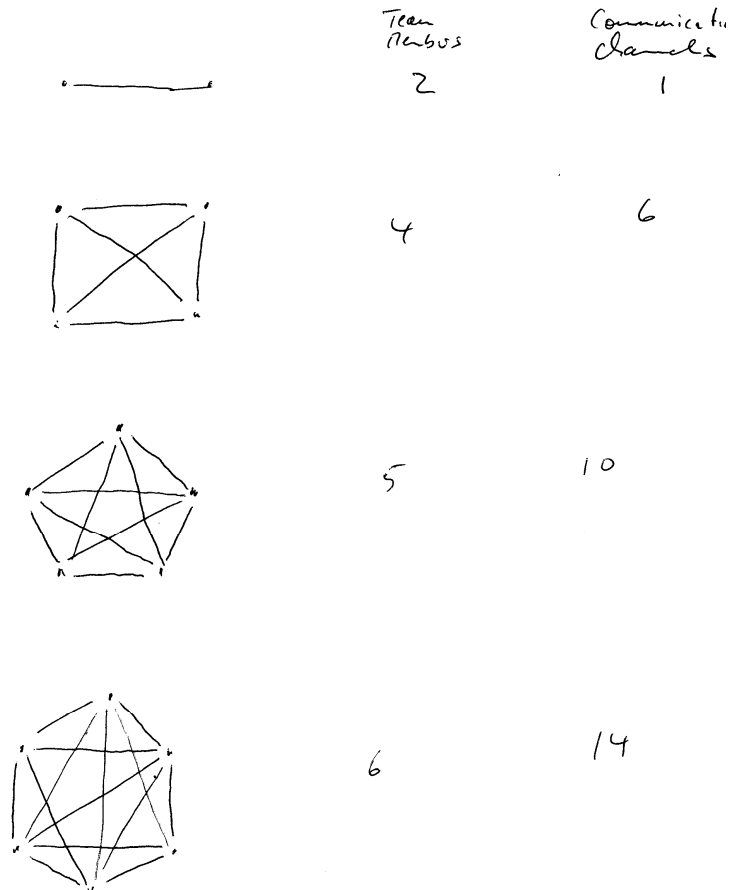# Team Organization
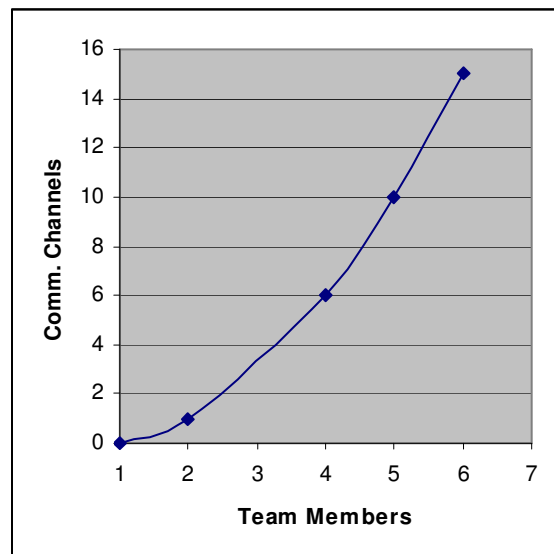
Why is team work so difficult? Communication overhead.

Consider the following teams:

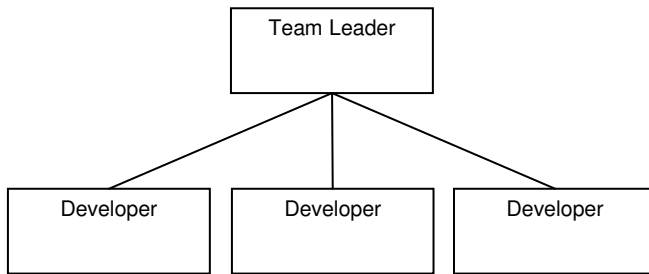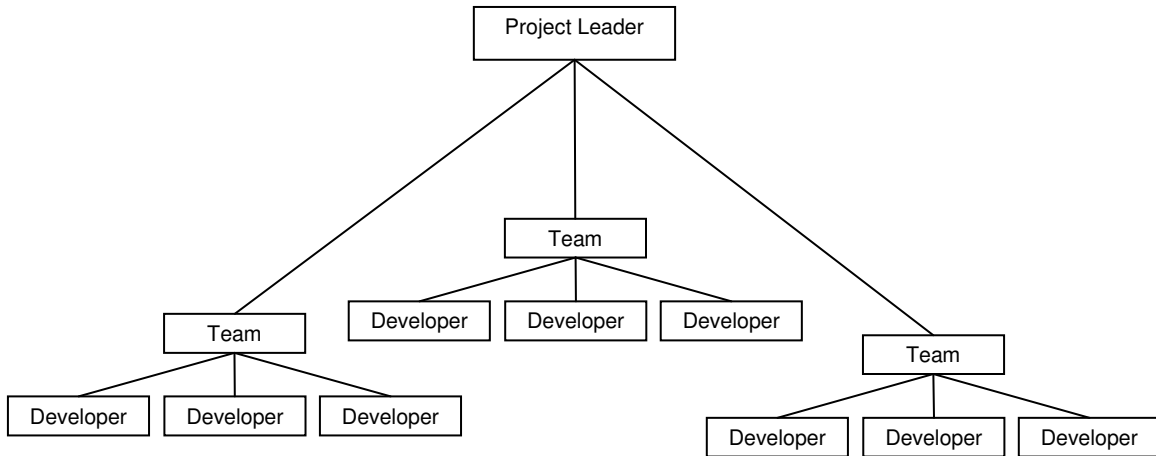| Team Members	Communication Channels
2	1
4	6
5	10
6	14

- Communication channels grow exponentially with the number of team members.
- This typically slows down projects – "the fallacy of saving a project by adding team members"
- Difficult to communicate all the technical details which come with a non-trivial project.

Hierarchical Team Organization

```
                    ┌──────────────┐
                    │ Team Leader  │
                    │              │
                    └──────────────┘
           ┌───────────────┼───────────────┐
    ┌──────────────┐┌──────────────┐┌──────────────┐
    │  Developer   ││  Developer   ││  Developer   │
    │              ││              ││              │
    └──────────────┘└──────────────┘└──────────────┘
```

Or for larger projects

```
                        ┌────────────────┐
                        │ Project Leader │
                        └────────────────┘
            ┌────────────────────┼────────────────────┐
                          ┌────────────┐
                          │    Team    │
                          └────────────┘
                     ┌─────────┼─────────┐
       ┌────────────┐│┌───────────┐┌───────────┐┌───────────┐
       │    Team    │││ Developer ││ Developer ││ Developer │
       └────────────┘│└───────────┘└───────────┘└───────────┘
      ┌──────┼──────┐                              ┌────────────┐
┌──────────┐┌──────────┐┌──────────┐               │    Team    │
│Developer ││Developer ││Developer │               └────────────┘
└──────────┘└──────────┘└──────────┘          ┌──────────┼──────────┐
                                        ┌──────────┐┌──────────┐┌──────────┐
                                        │Developer ││Developer ││Developer │
                                        └──────────┘└──────────┘└──────────┘
```

Notes:
- There is still information flow between developers but the primary information paths are as indicated.
- The exact nature of the teams depends on the skill level of personnel and the project to be accomplished.