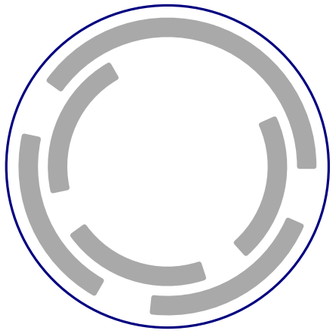
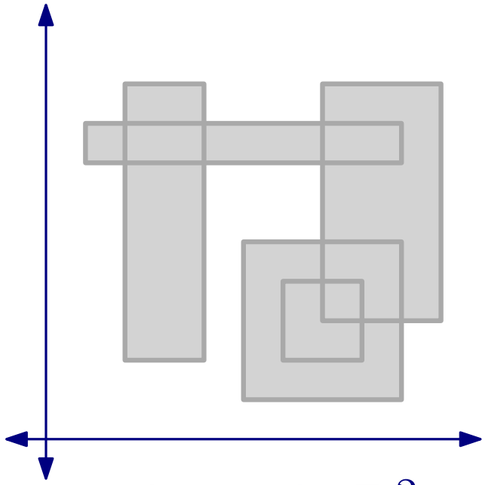
intervals in $\mathbb{R}$

(interval graphs)

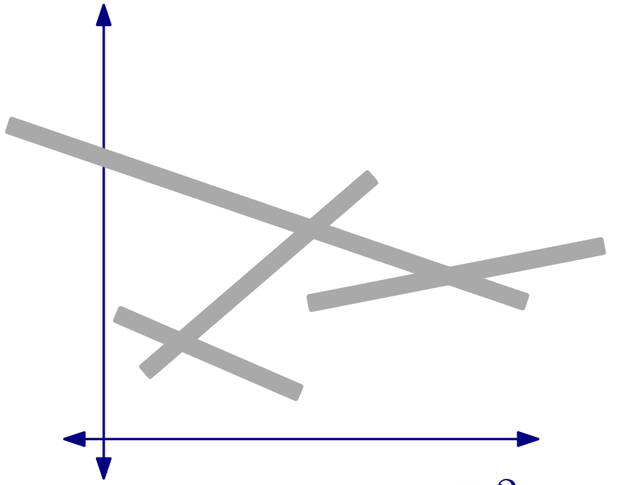


arcs of S^1

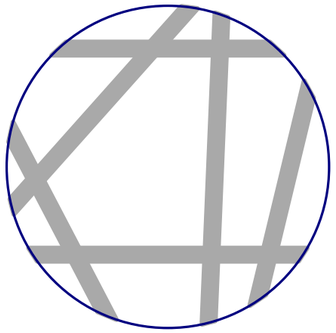
(circular arc graphs)



boxes in $\mathbb{R}^2$

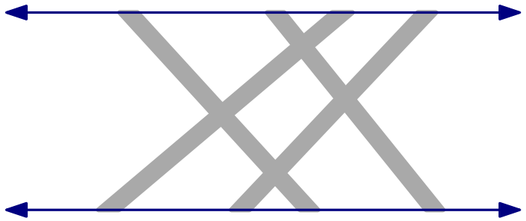


segments in $\mathbb{R}^2$



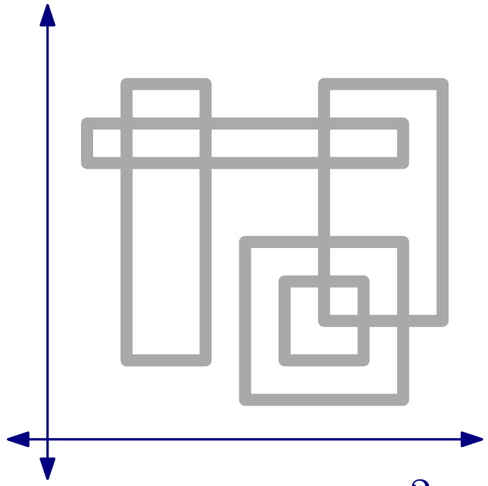
chords of S^1

(circle graphs)



chords in $\mathbb{R} \times \{0, 1\}$

(permutation graphs)



frames in $\mathbb{R}^2$

Proposition 3.13.
T tree $\Rightarrow \{T_i \subseteq T \mid T_i \text{ subtree}\}_{i \in I}$ has the Helly property.

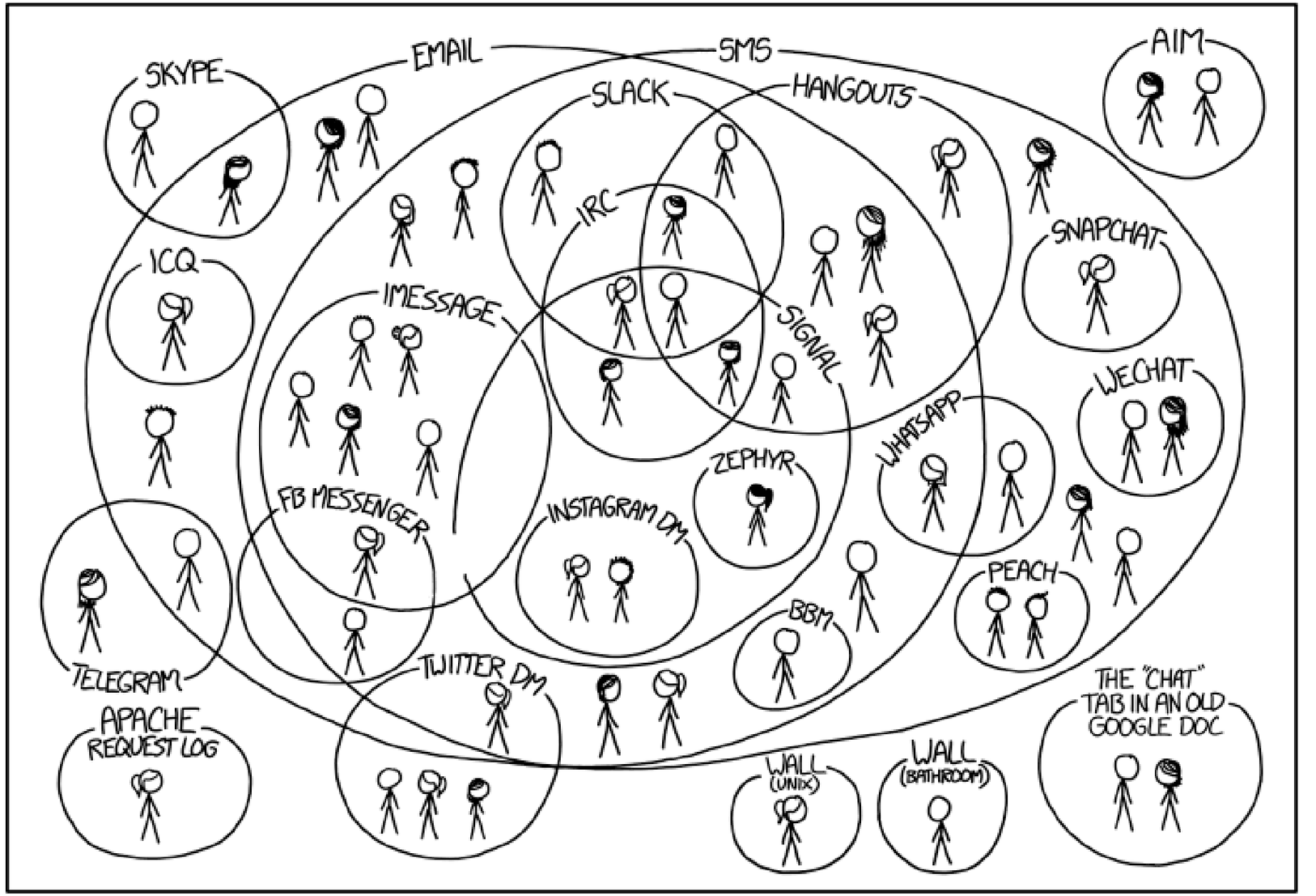
Theorem 3.14.
For every graph $G = (V, E)$ the following are equivalent:

(i) G is chordal

(ii) $\exists$ tree $T = (V_T, E_T)$, $\{T_v \subseteq T \mid v \in V, T_v \text{ subtree}\}$
such that $vw \in E \quad \Leftrightarrow \quad T_v \cap T_w \neq \emptyset$

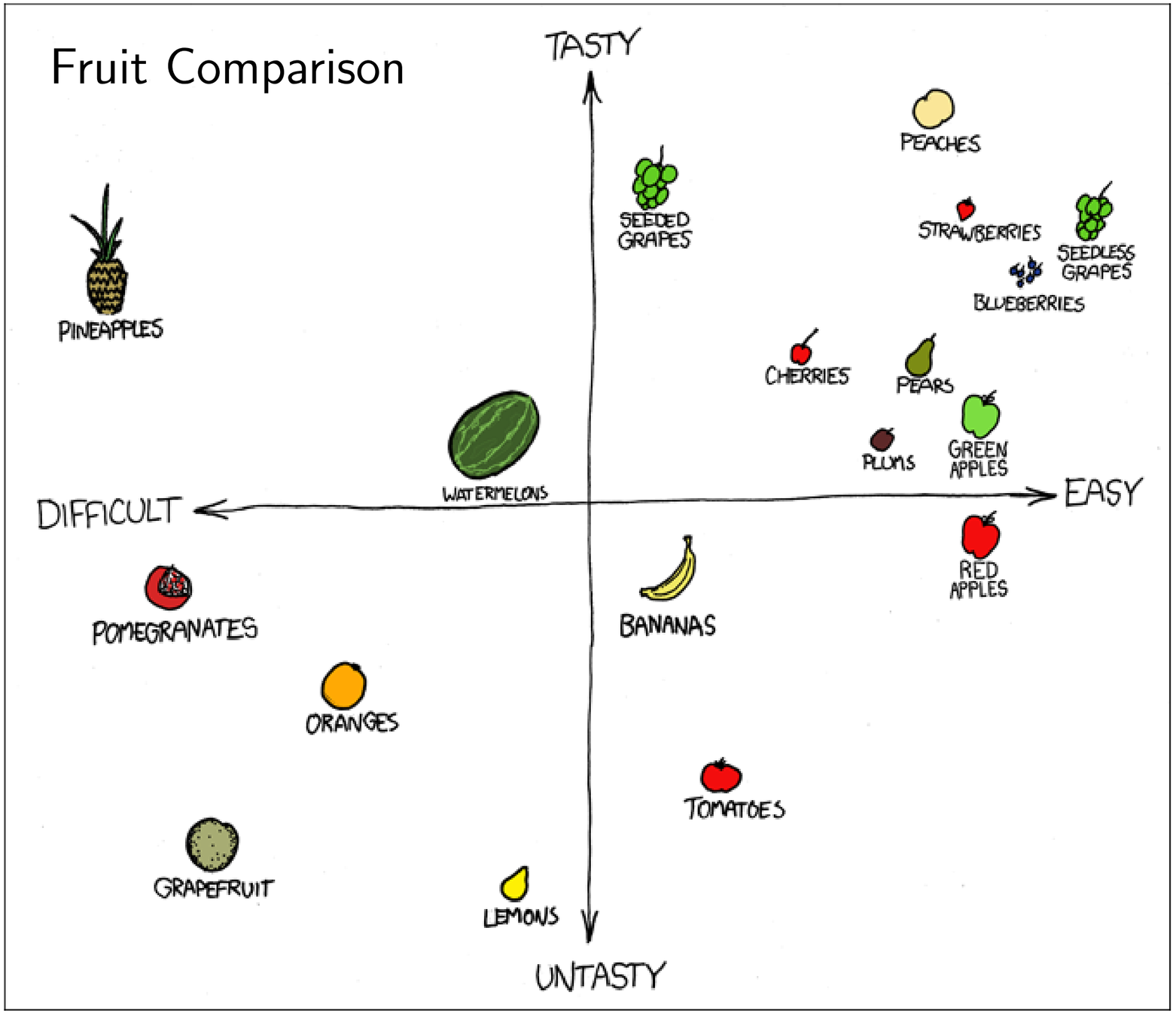
(iii) $\exists$ tree $T = (V_T, E_T)$ such that
$V_T = \{X \subseteq V \mid X$ inclusion-maximal clique in $G\}$ and
$\forall v \in V \quad K_v = \{X \in V_T \mid v \in X\}$ induces a subtree

Chat Systems

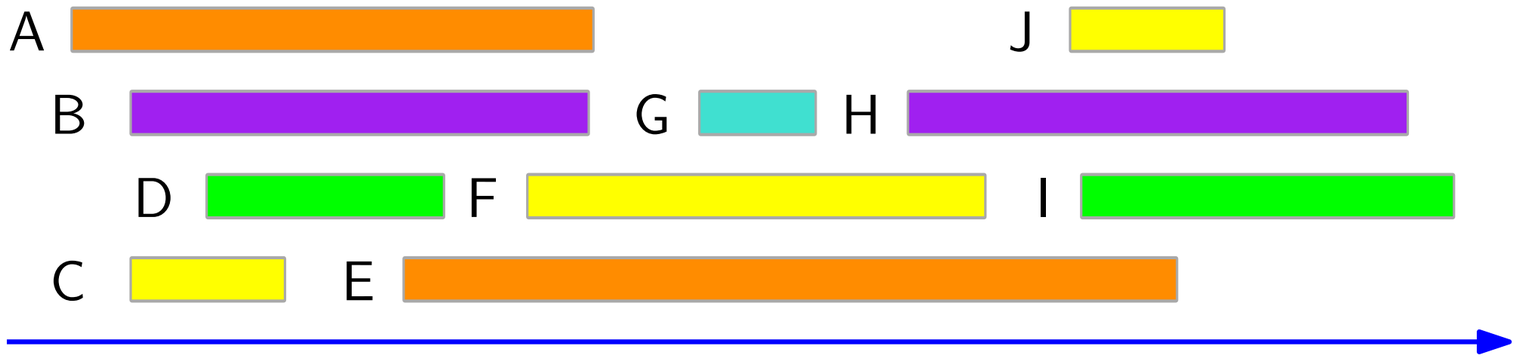


I HAVE A HARD TIME KEEPING TRACK OF WHICH CONTACTS USE WHICH CHAT SYSTEMS.

xkcd.com/1810


Fruit Comparison
TASTY
UNTASTY
DIFFICULT
EASY
PINEAPPLES
SEEDED GRAPES
PEACHES
STRAWBERRIES
SEEDLESS GRAPES
BLUEBERRIES
CHERRIES
PEARS
PLUMS
GREEN APPLES
WATERMELONS
RED APPLES
BANANAS
POMEGRANATES
ORANGES
TOMATOES
GRAPEFRUIT
LEMONS

xkcd.com/388



Complements of interval graphs have a transitive orientation.