

FORMULA MENENTUKAN RELASI (edges) DALAM NETWORK

Tiga jenis relasi dalam Kumu

No	Jenis Edge	Simbol	Kapan Dipakai
1	Directed	→	kekuasaan, konflik, bantuan
2	Undirected	—	alliance setara
3	Mutual	↔	hubungan dua arah tapi tidak identik

Tips untuk menggunakan edges:

Relasi	Tipe
Command	Directed
Funding	Directed
Proxy support	Directed
Conflict	Directed
Alliance	Mutual
Actor (person) - State	Directed

Contoh:

Iran → Hezbollah = *proxy_support*

USA → Israel = *military_aid*

Israel → Iran = *attack*

Benjamin Netanyahu → Israel = *"leader_of"*

Eyal Zamir → Israel = *"military_command"*

David Barnea → Israel = *"intelligence_head"*

Catatan:

Kalau **semua undirected**, kita akan kehilangan:

- siapa dominan
- siapa pemberi vs penerima

Kalau **semua directed**, network jadi:

- terlalu kompleks
- alliance terlihat tidak natural

Fokus ke **RELATION**, bukan hanya aktor

Dalam SNA **hubungan lebih penting daripada aktor**

- siapa mendukung siapa?
- siapa menyerang siapa?
- siapa tergantung siapa?

Di Kumu kita bisa melihat/menghitung metrics:

- ♦ **Centrality:** siapa paling kuat?
- ♦ **Betweenness:** siapa "broker"?
- ♦ **Density:** seberapa padat konflik?

Studi kasus Peran Israel - US - Iran tahun 2026:

Kategori	Jenis Label	Makna / Fungsi	Contoh Penggunaan
● Conflict / Hostility	conflict, attack, airstrike, missile_strike, retaliation, escalation, cyber_attack, targeted_killing, invasion	Menunjukkan aksi permusuhan atau kekerasan	Israel → Iran = airstrike
■ Alliance / Cooperation	alliance, strategic_alliance, cooperation, defense_pact, joint_operation, coalition	Hubungan kerja sama atau aliansi	USA — Israel = strategic_alliance
■ Power / Command	command, controls, leads, supervises, appoints	Relasi hierarki dan kekuasaan	Netanyahu → IDF = command
■ Resource Flow	funding, financial_support, weapons_supply, arms_transfer, training_support, logistical_support, humanitarian_aid, economic_aid	Aliran sumber daya (uang, senjata, dll.)	USA → Israel = weapons_supply
■ Proxy & Indirect	proxy_support, proxy_control, proxy_coordination, indirect_attack, mobilization	Dukungan melalui aktor perantara	Iran → Hezbollah = proxy_support
■ Intelligence / Covert	intel_sharing, surveillance, covert_operation, espionage, sabotage	Aktivitas intelijen atau operasi rahasia	Mossad → Iran = covert_operation
■ Political / Diplomatic	diplomatic_support, negotiation, mediation, sanction, condemnation, recognition	Relasi politik dan diplomasi	USA → Iran = sanction
■ Influence / Soft Power	political_influence, lobbying, propaganda, narrative_support, public_statement	Pengaruh opini, narasi, atau kebijakan	Senator → Govt = political_influence
Legal / Institutional	legal_action, investigation, resolution, compliance	Relasi hukum dan kelembagaan	UN → Iran = investigation
General (Fallback)	relationship, interaction, engagement	Relasi umum (tidak spesifik)	A → B = interaction

Kenapa menggunakan “**Big Data**” map dan bukan “**Stakeholders Map**”?

Aspek	Big Data Map	Stakeholder Map
Tujuan	Analisis sistem kompleks	Identifikasi aktor & peran
Skala	Besar (ratusan–ribuan node)	Kecil–menengah
Fokus	Relasi & pola jaringan	Aktor & kepentingan
Pendekatan	Data-driven (SNA)	Conceptual / mapping
Output	Insight struktural	Pemetaan posisi aktor

Elemen	Stakeholder Map	Big Data Map
Node	aktor utama	multi-level (aktor + organisasi + event)
Edge	sederhana	multi-type & weighted
Attribute	minimal	lengkap
Analisis	deskriptif	kuantitatif (SNA)