

LxBase

This documentation describes the entities and relationships that i2 TextChart software can extract from text documents.

Entities

Entities are the named items that i2 TextChart can find in a document. The context of the document is the only vehicle for determining any associated knowledge. Real-world knowledge (or externally encoded knowledge) does not determine associated knowledge with these entities.

The term *identity* is the collection of entities in a document that describes or references a particular entity in the real world.

ADDRESS

The ADDRESS entity type represents postal addresses such as "123 Main St., Seattle, WA 98101".

Attributes

- norm
- internal_location
- norm
- building_name
- street_name
- house_number
- city
- state_county_level
- province
- postal_code
- country
- suite_number
- assignee_name
- cntry_code
- grid_reference
- mgrs_coordinate
- utm_coordinate
- datum_code
- ups_coordinate
- bng_coordinate
- dms_coordinate
- decimal_degree
- easting
- northing

- hemisphere
- utm_zone
- altitude
- owner
- phone_number
- fax_number
- po_box
- source_description
- source_grade
- street_direction
- street_type
- monetary_amount
- abstract_flag
- abstract_binary
- purchase_date
- built
- surface_composition
- target_details
- subtype
 - physical_address
 - po_box
 - internal_location
- [[customer_specific]]

CONVEYANCE

The CONVEYANCE entity type represents vehicles or other means of conveyance. This entity type also refers to generic as well as specific instances, including both "*several aircraft*" and "*Volkswagen Jetta*".

Attributes

- norm
- year
- idnum
- type
- make
- model
- manufacturer
- designator
- vin
- color
- owner

- number_of_openings
- number_of_seats
- registered_state
- registered_country
- state_county_level
- suspicious
- assignee_name
- collateral
- filing_office
- filing_type
- filing_status
- address
- grid_reference
- mgrs_coordinate
- utm_coordinate
- datum_code
- ups_coordinate
- bng_coordinate
- dms_coordinate
- decimal_degree
- easting
- northing
- hemisphere
- utm_zone
- information_grade
- keyword
- keyword_type
- altitude
- prev_address
- serial_number
- source_description
- source_grade
- trademark
- body_style
- hull_number
- tail_number
- weight
- monetary_amount
- quantity

- timestamp
- abstract_flag
- abstract_binary
- purchase_date
- size
- callsign
- capabilities
- condition
- freq
- freq_range
- fuel_type
- isr_platform
- license_plate_num
- manufacture_date
- operational_status
- order_of_battle
- specialty_equipment
- target_details
- subtype
 - air
 - land
 - pipeline
 - space
 - vessel
- [[customer_specific]]

CRIME

The CRIME entity type represents criminal offenses, such as "*armed robbery*" or "*DUI*".

Attributes

- norm
- subtype
- date_of_crime
- start_date
- end_date
- lat (latitude in decimal degrees)
- lon (longitude in decimal degrees)
- coordinate
- location
- weapon_used

- crime_code
- verdict
- charging_organization
- defendant_name
- plaintiff_name
- crime_description
- classification_description
- classification_title
- information_grade
- keyword
- keyword_type
- source_description
- source_grade
- duration
- timestamp
- event_date
- abstract_flag
- abstract_binary
- idnum
- investigator
- motive
- items_taken
- casualties
- demographics
- [[customer_specific]]

DRUG

The DRUG entity type includes both legal and illicit drug names and general drug types, such as "*beta blocker*", "*marijuana*", and "*omeprazole*".

Attributes

- norm
- subtype
 - illicit
 - legal
- active_ingredients
- product_owner
- amount
- drug_alt_name
- weight

- price
- side_effects
- interactions
- nick_name
- drug_family
- classification_description
- classification_title
- filing_office
- filing_type
- filing_status
- color
- information_grade
- keyword
- keyword_type
- serial_number
- source_description
- source_grade
- trademark
- version
- monetary_amount
- quantity
- timestamp
- abstract_flag
- abstract_binary
- distinguishing_feature
- manufacture_date
- idnum
- dea_number
- schedule
- [[customer_specific]]

EMAIL

The EMAIL entity type represents email addresses such as "john.doe@yahoo.com". It does not include generic references to email or email addresses, such as "*her email*" or "*Gmail*".

Attributes

- norm
- subtype
- owner
- platform

- country
- organization
- ip_address
- mac_address
- source_description
- source_grade
- abstract_flag
- abstract_binary
- password
- service_provider
- [[customer_specific]]

EVENT

The EVENT entity type represents specifically named social, professional, or religious gatherings; and major world events of a specific date. EVENT also includes generic references to non-specific events such as "*the bowling tournament*", "*the last war*", or "*the attack*".

An event such as "*the 23rd annual Wing Bowl*" is extracted as "*Wing Bowl*" (without the numeral), while an event such as "*the 39th Annual Penn Linguistics Conference*" is extracted as "*39th Annual Penn Linguistics Conference*" (including the numeral), since the temporal term "annual" is capitalized and part of the title.

Attributes

- norm
- subtype
 - generic
 - named
 - weather
- start_date
- end_date
- lat (latitude in decimal degrees)
- lon (longitude in decimal degrees)
- coordinate
- location
- weapon_used
- defendant_name
- participating_individual
- holder_name
- plaintiff_name
- subject_name
- arrest_summons_reference
- suit_cause

- event_description
- event_title
- grid_reference
- mgrs_coordinate
- utm_coordinate
- datum_code
- ups_coordinate
- bng_coordinate
- dms_coordinate
- decimal_degree
- easting
- northing
- hemisphere
- utm_zone
- information_grade
- keyword
- keyword_type
- source_description
- source_grade
- duration
- timestamp
- event_date
- abstract_flag
- abstract_binary
- idnum
- casualties
- demographics
- desired_effect
- type
- target_details
- [[customer_specific]]

FACILITY

The FACILITY entity type represents named buildings, monumental structures, and collections of buildings. This entity type does not include generic, nominal references to facilities, such as "*the building*", "*the police station*", or "*the airport*".

Metonymic references for organizations that are facility names are extracted as FACILITY, not ORG. For example, in "*The Pentagon announced spending cuts*", where "*Pentagon*" is used to represent the US Department of Defense, "*Pentagon*" is extracted as a FACILITY.

Attributes

- norm
- subtype
 - academic
 - infrastructure
 - law_enforcement
 - medical
 - military
 - religious
 - stadium
 - transit
 - government
 - internal_location
- gaz_id
- dsg
- dsgrank
- dsgfeature
- pc
- country
- province
- admin_region
- lat (latitude in decimal degrees)
- lon (longitude in decimal degrees)
- elevation_m (elevation above sea level in meters)
- source
- region
- subregion
- ufi
- coordinate
- parent_organization
- date_established
- date_closure
- alternative_name
- idnum
- altitude
- address
- assignee_name
- attorney_name
- building_name
- chapter

- chapter_number
- classification_description
- classification_title
- collateral
- cntry_code
- email_address
- phone_number
- social_id
- grid_reference
- mgrs_coordinate
- utm_coordinate
- datum_code
- ups_coordinate
- bng_coordinate
- dms_coordinate
- decimal_degree
- easting
- northing
- hemisphere
- utm_zone
- information_grade
- keyword
- keyword_type
- line_of_business
- owner
- fax_number
- po_box
- prev_address
- secured_party_name
- source_description
- source_grade
- web_address
- credit_limit
- monetary_amount
- assets
- liabilities
- number_employees
- timestamp
- abstract_flag

- abstract_binary
- purchase_date
- built
- freq
- freq_range
- operational_status
- specialty_equipment
- surface_composition
- target_details
- [[customer_specific]]

GEOCOORDINATE

The GEOCOORDINATE entity type represents geocoordinates for geospatial mapping, such as "30.99727°N 120.00213°E" and "1.877301, 116.171488".

Attributes

- norm
- subtype
 - be_number (basic encyclopedic number)
 - dds (decimal degree system)
 - dms (degrees, minutes, seconds)
 - georef
 - maidenhead
 - mgrs
 - ups
 - utm
 - usng
- country
- lat (latitude in decimal degrees)
- lon (longitude in decimal degrees)
- placename
- gaz_id
- dsg
- dsgrank
- dsgfeature
- pc
- province
- admin_region
- elevation_m (elevation above sea level in meters)
- source

- region
- subregion
- ufi
- coordinate
- city
- cntry_code
- grid_reference
- mgrs_coordinate
- utm_coordinate
- datum_code
- ups_coordinate
- bng_coordinate
- dms_coordinate
- decimal_degree
- easting
- northing
- hemisphere
- utm_zone
- information_grade
- altitude
- source_description
- source_grade
- abstract_flag
- abstract_binary
- target_details
- [[customer_specific]]

IDNUM

The IDNUM entity type represents identification numbers such as social security numbers, account numbers, serial numbers, SIM numbers, ICCIDs, IBANs, and ISBNs.

Attributes

- norm
- country
- state
- company
- legal_code
- suspicious
- type
- id_user

- id_issuer
- currency_type
- source_description
- source_grade
- timestamp
- abstract_flag
- abstract_binary
- org_name
- person_name
- security_designation
- class_level
- subtype
 - accession
 - account
 - cve
 - document
 - hash
 - iban
 - isbn
 - issn
 - mac
 - serial
 - sim
 - social
 - ssn
 - swift
 - telecode
 - vin
- subset (law_enforcement_ids)
 - felony
 - misdemeanor
 - violent
 - nonviolent
- [[customer_specific]]

IMPLEMENT

The IMPLEMENT entity type represents tools and instruments such as farm, medical, or law enforcement equipment, as well as musical or scientific instruments.

Attributes

- norm
- company
- product_name
- type
- make
- model
- idnum
- height
- weight
- country
- suspicious
- collateral
- ip_address
- mac_address
- imsi_number
- imei_number
- iccid_number
- filing_office
- filing_type
- filing_status
- color
- owner
- serial_number
- source_description
- source_grade
- trademark
- version
- monetary_amount
- quantity
- abstract_flag
- abstract_binary
- condition
- status
- distinguishing_feature
- manufacture_date
- subtype
 - law_enforcement
 - medical
 - scientific

- farm
- military
- miscellaneous
- [[customer_specific]]

KEYWORD

The KEYWORD entity type denotes a particular keyword or coded speech used to mask the intended content.

This entity type is intentionally left "blank" out-of-the-box so that users can customize it to their industry-specific needs.

Attributes

- norm
- subtype
- [[customer_specific]]

MONEY

The MONEY entity type represents numeric amounts of money, labeled by the currency type.

Attributes

- converted_amount
- currency
- sender
- receiver
- creditor
- debtor
- monetary_payee
- monetary_payer
- payment_method
- check_number
- currency_type
- source_description
- source_grade
- date_passed
- date_cleared
- transaction_date
- idnum
- abstract_flag
- abstract_binary
- routing_number
- numeric_format

- subtype
- norm
- [[customer_specific]]

ORG

The ORG entity type represents organization names. This entity type does not include nominal references to organizations, such as "*terrorists*", "*the police*", or "*the government*".

Organization names that are immediately adjacent to a PLACE include the PLACE name as part of the ORG, unless separated by a preposition. For example, "*University of Illinois, Urbana-Champaign*" includes "*Urbana-Champaign*" as part of the ORG, but "*Bradley University in Peoria, Illinois*" does not include "*Peoria, Illinois*" as part of the ORG.

Some exceptions to the above rule are "*Al Qaida in the Arabian Peninsula*", "*Al Qaida in Yemen*", and so on.

Attributes

- norm
- country
- lat (latitude in decimal degrees)
- lon (longitude in decimal degrees)
- subtype & subset
 - academic
 - commercial
 - criminal
 - education
 - financial
 - central_bank
 - commercial_bank
 - development_bank
 - investment_bank
 - government
 - executive
 - intelligence
 - judicial
 - legislative
 - inter_department
 - law_enforcement
 - medical
 - military
 - political_party
 - ngo
 - political

- publisher
- social
- tribal
- weapon_manufacturer
- additional_information
- affiliation
- date_established
- date_closure
- alternative_name
- idnum
- registered_name
- related_company_registration_number
- related_organization_name
- attorney_name
- chapter
- chapter_number
- classification_description
- classification_title
- company_size
- cntry_code
- email_address
- phone_number
- social_id
- address
- grid_reference
- mgrs_coordinate
- utm_coordinate
- datum_code
- ups_coordinate
- bng_coordinate
- dms_coordinate
- decimal_degree
- easting
- northing
- hemisphere
- utm_zone
- information_grade
- keyword
- keyword_type

- line_of_business
- owner
- fax_number
- po_box
- prev_address
- currency_type
- secured_party_name
- source_description
- source_grade
- state_county_level
- web_address
- credit_limit
- monetary_amount
- assets
- liabilities
- number_employees
- timestamp
- abstract_flag
- abstract_binary
- critical_industry
- demographics
- influenced_by
- operational_status
- order_of_battle
- specialty_equipment
- target_details
- [[customer_specific]]

PERSON

The PERSON entity type represents named people. This entity type does not include nominal references to people, such as "*terrorist*", "*the judge*", or "*the president*".

Attributes

- norm
- gender
- given_name
- second_given_name
- sur_name
- second_name
- nick_name

- full_name
- cause_of_death
- date_of_birth
- date_of_death
- hair_color
- hair_type
- eye_color
- height
- weight
- occupation
- second_occupation
- other_alias
- government_id_number
- nationality
- age
- physical_feature
- criminal_status
- race
- alias
- face_feature
- known_injury
- ideology
- marital_status
- blood_type
- idnum
- mother_name
- father_name
- children
- number_of_children
- allegiance
- language_spoken
- military_experience
- tribe_subtribe
- known_associate
- attorney_name
- relationship
- place_of_birth
- email_address
- phone_number

- social_id
- address
- grid_reference
- mgrs_coordinate
- utm_coordinate
- datum_code
- ups_coordinate
- bng_coordinate
- dms_coordinate
- decimal_degree
- easting
- northing
- hemisphere
- utm_zone
- body_build
- information_grade
- keyword
- keyword_type
- mo_identifier
- pncid_number
- cro_id_number
- national_insurance_number
- passport_number
- ssn_number
- suffix
- title
- work_number
- home_number
- cell_number
- fax_number
- pager_number
- prev_address
- secured_party_name
- source_description
- source_grade
- monetary_amount
- salary
- assets
- liabilities

- timestamp
- time_of_death
- weapon_used
- abstract_flag
- abstract_binary
- works_for
- account
- kia
- wia
- abd
- det
- education_level
- drivers_license
- former_occupation
- influenced_by
- language_proficiency
- license_plate_num
- operational_status
- password
- political_affiliation
- target_details
- affiliation
 - convention
 - western
 - asian
 - latin
 - iberian_es
 - iberian_pt
 - hungarian
 - slavic
 - arabic
 - brazilian
 - tribal
 - mixed
- subtype
 - author
 - elected_official
- [[customer_specific]]

PHONE

The PHONE entity type represents any kind of device with a telephone number. The PHONE entity type includes only actual devices, not generic references to phones or phone numbers, such as "*the phone*", "*Jane's phone*", or "*dial the fax*".

Attributes

- norm
- subtype
 - domestic
 - international
- country
- device
- international_code
- area_code
- extension
- main_number
- make
- model
- provider
- city_registered
- country_registered
- belongs_to
- idnum
- phone_exchange_number
- call_type
- imsi_number
- imei_number
- iccid_number
- international_phone_region
- source_description
- source_grade
- abstract_flag
- abstract_binary
- timestamp
- sms_text_message
- [[customer_specific]]

PLACE

The PLACE entity type represents places with names. This entity type does not include generic, nominal references to places, such as "*the river*" or "*the big city*", but it does include generic references to specific places, as in "*the Iraqi capital*".

The PLACE entity type also does not include FACILITY, which is a separate entity. Place names adjacent to each other are considered two separate places, except in cases where the two place names adjacent to each other represent a single place, as in "*City, Province*" or "*City, Country*".

Attributes

- norm
- gaz_id
- dsg
- dsgrank
- dsgfeature
- pc
- country (ISO 3166-1 country digraph)
- state_county_level
- province (ISO 3166-2 province digraph)
- admin_region (string that corresponds to US counties or foreign equivalent)
- lat (latitude in decimal degrees)
- lon (longitude in decimal degrees)
- elevation_m (elevation above sea level in meters)
- source (string of the source)
- region
- ufi
- coordinate
- subtype
 - terrain
 - hydro
 - manmade
 - island
 - populated
 - military
 - road
 - unknown
- subregion
 - sasia (south asia)
 - seasa (south east asia)
 - easia (east asia)
 - neuro (north europe)
 - balk (balkans)
 - seuro (south europe)
 - ceuro (central europe)
 - nafr (north africa)

- safr (south africa)
- wafr (west africa)
- cafr (central africa)
- eafr (east africa)
- ocean (oceania)
- samer (south americas)
- carib (caribbean)
- camer (central america)
- namer (north americas)
- antsb (antarctica)
- ceura (entral eurasia)
- russa (russia)
- cauc (caucasus)
- meast (middle east)
- assignee_name
- cntry_code
- grid_reference
- mgrs_coordinate
- utm_coordinate
- datum_code
- ups_coordinate
- bng_coordinate
- dms_coordinate
- decimal_degree
- easting
- northing
- hemisphere
- utm_zone
- information_grade
- keyword
- keyword_type
- altitude
- secured_party_name
- source_description
- source_grade
- monetary_amount
- abstract_flag
- abstract_binary
- demographics

- affiliation
- surface_composition
- target_details
- [[customer_specific]]

POI

The POI entity type represents persons of interest used in social media, texts, chats, and other shorter discussions.

Attributes

- norm
- subtype
- given_name
- second_given_name
- second_name
- sur_name
- nick_name
- gender
- convention
- norm
- full_name
- cause_of_death
- date_of_birth
- date_of_death
- hair_color
- hair_type
- eye_color
- height
- weight
- occupation
- second_occupation
- other_alias
- government_id_number
- nationality
- age
- physical_feature
- criminal_status
- race
- alias
- face_feature

- known_injury
- ideology
- marital_status
- blood_type
- idnum
- mother_name
- father_name
- children
- number_of_children
- allegiance
- language_spoken
- military_experience
- tribe_subtribe
- known_associate
- attorney_name
- relationship
- place_of_birth
- email_address
- phone_number
- social_id
- address
- grid_reference
- mgrs_coordinate
- utm_coordinate
- datum_code
- ups_coordinate
- bng_coordinate
- dms_coordinate
- decimal_degree
- easting
- northing
- hemisphere
- utm_zone
- body_build
- information_grade
- keyword
- keyword_type
- mo_identifier
- pncid_number

- cro_id_number
- national_insurance_number
- passport_number
- ssn_number
- suffix
- title
- work_number
- home_number
- cell_number
- fax_number
- pager_number
- prev_address
- source_description
- source_grade
- monetary_amount
- salary
- assets
- timestamp
- weapon_used
- abstract_flag
- abstract_binary
- works_for
- account
- kia
- wia
- abd
- det
- education_level
- drivers_license
- former_occupation
- influenced_by
- language_proficiency
- license_plate_num
- operational_status
- password
- political_affiliation
- target_details
- affiliation
- [[customer_specific]]

PRODUCT

The PRODUCT entity type represents commercial product names, such as "google+" and "chromebook". It does not include generic references to products, such as "wine" or "pretzels".

Attributes

- norm
- subtype
- company
- product_name
- make
- model
- idnum
- height
- weight
- country
- suspicious
- collateral
- ip_address
- mac_address
- imsi_number
- imei_number
- iccid_number
- filing_office
- filing_type
- filing_status
- color
- owner
- serial_number
- source_description
- source_grade
- trademark
- version
- monetary_amount
- quantity
- timestamp
- abstract_flag
- abstract_binary
- purchase_date
- size
- condition

- status
- distinguishing_feature
- manufacture_date
- [[customer_specific]]

PUBLICATION

The PUBLICATION entity type represents communication works, such as written works, online sermons, news publications, and movies.

Attributes

- norm
- publication_date
- story_start_date
- title
- type
- idnum
- url
- story_end_date
- reported_date
- entered_date
- author
- review_status
- district
- division
- case_status
- classification_code
- publisher
- arrest_summons_reference
- suit_cause
- classification_description
- classification_title
- language
- filing_office
- filing_type
- filing_status
- currency_type
- source_description
- source_grade
- awards
- filing_amount

- transaction_date
- abstract_flag
- abstract_binary
- encryption_type
- summary
- subtype
 - form
 - report
 - publisher
 - government
 - travel
 - financial
 - law
 - medical
 - academic
 - publication_date
 - propaganda
 - issued_identification
- [[customer_specific]]

PUNITIVE_MEASURE

The PUNITIVE_MEASURE entity type represents a punishment made against an entity, such as imprisonment, torture, or fines.

Attributes

- norm
- start_date
- end_date
- lat (latitude in decimal degrees)
- lon (longitude in decimal degrees)
- coordinate
- location
- weapon_used
- holder_name
- participating_individual
- source_description
- source_grade
- event_date
- monetary_amount
- abstract_flag

- abstract_binary
- subtype
 - death
 - prison
 - torture
 - on_record
 - financial
- [[customer_specific]]

SOCIAL

The SOCIAL entity type represents identifiers relevant to social media platforms, such as usernames and handles. It does not include email addresses, hashtags, or website URLs, which are separate entity types.

Attributes

- norm
- subtype
- owner
- platform
- country
- organization
- source_description
- source_grade
- abstract_flag
- abstract_binary
- password
- service_provider
- [[customer_specific]]

TIMESPAN

The TIMESPAN entity type indicates a range of time or ranges of dates, such as "*Mon-Thur*" or "*9:00-11:00pm*".

Attributes

- norm
- subtype
- date_range_and_location
- [[customer_specific]]

TIMESTAMP

The TIMESTAMP entity type represents date & time expressions.

Date & time expressions that are adjacent to each other and represent a narrowing or broadening of the same time are extracted as a single entity. Date & time expressions that are adjacent to each other but represent distinct temporal expressions are extracted as separate entities.

Attributes

- norm
- holiday
- weekday
- day
- month
- year
- hour
- minute
- second
- ampm
- timezone
- epoch
- era
- century
- scope
- direction
- multiplier
- to_timestamp
- from_timestamp
- subtype & subset
 - absolute
 - holiday
 - range
 - relative
 - issue_date
 - expiration_date
- [[customer_specific]]

TRAUMA

The TRAUMA entity type describes possible lethal injury, such as dismemberment.

Attributes

- norm
- subtype
- location
- size

- trauma_level
- vitals_affected
- treatment_required
- burn_type
- break_type
- recovery_time
- medication_required
- subject_name
- [[customer_specific]]

URL

The URL entity type represents web addresses such as websites and IP addresses. It does not include other locators in cyberspace such as email addresses, social media usernames, and so on.

URL also excludes generic references to web addresses, such as "*the company's website*" or "*Google*".

Attributes

- norm
- intelligence_date
- reference
- source
- provider
- related_web_address
- belongs_to
- source_description
- source_grade
- abstract_flag
- abstract_binary
- service_provider
- account_type
- subtype
 - URL
 - ipv4
 - ipv6
 - ip_range
- [[customer_specific]]

WEAPON

The WEAPON entity type represents weapons of a conventional, CBRNE, or cyber nature. Unlike other entity types, WEAPON includes generic weapon terms such as "*3 rifles*" as well as specific weapon terms such as "*3 AK-47s*".

Attributes

- norm
- manufacturer
- place_of_manufacture
- size
- weapon_type
- ammunition
- country
- idnum
- user
- coordinate
- lat
- lon
- name
- range
- speed
- model
- filing_office
- filing_type
- filing_status
- grid_reference
- mgrs_coordinate
- utm_coordinate
- datum_code
- ups_coordinate
- bng_coordinate
- dms_coordinate
- decimal_degree
- easting
- northing
- hemisphere
- utm_zone
- color
- information_grade
- keyword
- keyword_type
- altitude
- owner
- serial_number
- source_description

- source_grade
- trademark
- version
- weight
- monetary_amount
- quantity
- timestamp
- abstract_flag
- abstract_binary
- purchase_date
- condition
- status
- distinguishing_feature
- manufacture_date
- operational_status
- target_details
- subset
- subtype
 - cbrne
 - conventional
 - cyber
 - ammunition
- [[customer_specific]]

No-output entities

No-output entities are entities that i2 TextChart extracts, but whose output it suppresses.

ALERT_TYPE

The ALERT_TYPE entity type represents travel alerts and travel warnings from the State Department.

Attributes

- norm
- subtype
- description
- idnum
- organization
- level
- area_of_alert
- alert_delivery_method

- alert_feed_subscription
- alert_retrieval
- [[customer_specific]]

ANATOMICAL_TERM

The ANATOMICAL_TERM entity type describes parts of the body.

Attributes

- norm
- subtype
- location
- size
- injury_type
- condition
- weapon
- [[customer_specific]]

AWARD

The AWARD entity type represents a mark of recognition in honor of an achievement, such as "*Grammy*", "*World Series Champion*", or "*Magna Cum Laude*".

Attributes

- norm
- issuing_authority
- monetary_amount
- recipient
- nominee
- date_of_award
- award_item
- subtype
 - sport
 - music
 - academic
 - beauty
 - film
 - animal
 - military
 - design
 - technology
- [[customer_specific]]

BIOMETRIC

The BIOMETRIC entity type extracts mentions of biometric data present in text, such as "*fingerprints*" and "*iris scan*".

Attributes

- norm
- subtype (by default = unknown)
 - match
 - no_match
 - unknown
- [[customer_specific]]

CHEMICAL

The CHEMICAL entity type represents named chemicals.

Attributes

- norm
- common_name
- cas
- symbol
- atomic_mass
- atomic_number
- melting_point
- density
- appearance
- formula
- ph_level
- iupac_id
- molar_mass
- more_general_ingredient
- symptoms
- health_effects
- toxicity
- subtype
 - drug_active_ingredient
- [[customer_specific]]

CITATION

The CITATION entity type denotes legal citation numbers, such as "*Smith v. Doe, 2000 VA. 3, Ariz. 53, 120 Miss 12*".

Attributes

- norm
- publication_date
- title
- type
- idnum
- url
- reported_date
- entered_date
- author
- review_status
- district
- division
- case_status
- classification_code
- publisher
- defendant_name
- holder_name
- plaintiff_name
- subject_name
- suit_cause
- currency_type
- awards
- filing_amount
- abstract_flag
- abstract_binary
- summary
- subtype
- [[customer_specific]]

CLASSIFICATION_LEVEL

The CLASSIFICATION_LEVEL entity type represents a used classification level.

Attributes

- norm
- subtype
- class_level
- clear_access
- owner
- assignee
- issuer

- confidence_evaluation
- [[customer_specific]]

CONTRACT_TYPE

The CONTRACT_TYPE entity type represents a type of contracting vehicle, such as "*idmq*", "*firm-fixed price*", and so on.

Attributes

- norm
- subtype
- [[customer_specific]]

CONTROL

The CONTROL entity type represents document controls and classification markings.

Attributes

- norm
- subtype
 - TS
 - S
 - C
 - U
- [[customer_specific]]

DISEASE

The DISEASE entity type represents names of diseases and medical conditions or episodes, such as "*hemophilia*" and "*heart attack*".

Attributes

- norm
- subtype
 - disorder
 - hiv_aids
 - cancer
 - viral
 - bacterial
 - encephalitis
 - injury
- icd10
- icd9
- treatment
- mortality rate

- symptoms
- associated_prescriptions
- treatment_success
- subject_name
- classification_description
- classification_title
- information_grade
- keyword
- keyword_type
- source_description
- source_grade
- timestamp
- abstract_flag
- abstract_binary
- [[customer_specific]]

DNA

The DNA entity type represents DNA sequences, such as "*forward (position 552-570) 5#-CCAAACCCCAAAGACACCC-3#*".

Attributes

- norm
- subtype
- gender
- identified_illness
- sequence
- modification_site
- [[customer_specific]]

FILE_N#ME

The FILE_N#ME entity type represents file names found between quotation marks, such as "updated_img0912.jpg" or "documentation.html".

Attributes

- norm
- subtype
- publication_date
- story_start_date
- title
- type
- idnum
- url

- story_end_date
- reported_date
- entered_date
- author
- review_status
- district
- division
- classification_code
- case_status
- source_description
- source_grade
- abstract_flag
- abstract_binary
- encryption_type
- size
- [[customer_specific]]

FINANCIAL_INDEX

The FINANCIAL_INDEX entity type represents financial market indices such as "*Nasdaq*" or "*S&P 500*".

Attributes

- norm
- subtype
 - exchange
 - index
- country
- price
- index_name
- index_high
- index_low
- prev_close
- [[customer_specific]]

FUNDS

The FUNDS entity type denotes a named or general reference to a monetary fund, grant, or tax.

Attributes

- norm
- subtype
- issuing_authority
- monetary_amount

- recipient
- idnum
- fund_awarded_on
- fund_type
- [[customer_specific]]

GENE

The GENE entity type indicates the genetic code that corresponds to a gene, such as "*LYRM4*" and "*FARS2*".

Attributes

- norm
- identified_illness
- sequence
- modification_site
- therapy_applied
- subtype
 - nucleotide
 - locus
 - genetic_id
 - gene_variant
 - gene_product
- [[customer_specific]]

GENERIC

The GENERIC entity type serves to extract non-specific entities such as "*suspect*".

Attributes

- norm
- subtype
 - person
 - org
 - place
 - facility
- [[customer_specific]]

HASHTAG

The HASHTAG entity type represents social media hashtags for crowd source topics, such as "*ShareaCoke*".

Attributes

- norm

- subtype
- [[customer_specific]]

IDEOLOGY

The IDEOLOGY entity type represents religious entities, such as "*muslim*" or "*neo-evangelicalism*".

Attributes

- norm
- source_description
- source_grade
- subtype
 - western
 - eastern
 - historic
 - native
 - pagan
 - fictional
 - islamic
 - judaism
 - christian
 - political
- [[customer_specific]]

INFRASTRUCTURE

The INFRASTRUCTURE entity type represents fundamental facilities that serve a geographic area.

Attributes

- norm
- subtype
- city
- country
- state
- type
- style
- functional_usage
- owner
- company
- builder
- price
- idnum
- made_from

- adjacent_structures
- [[customer_specific]]

MEASURE

The MEASURE entity type represents measured quantities with units, such as "12 years" or "14.5 km".

Attributes

- norm
- hours
- minutes
- seconds
- amp
- degree
- joule
- pound
- kg
- psi
- volt
- watt
- liter
- gram
- gallon
- ounce
- meter
- kilometer
- mile
- acre
- celsius
- fahrenheit
- kelvin
- altitude
- depth
- unit
- numeric_format
- subtype
 - temperature
 - orbit_location
 - distance
 - speed
 - volume

- altitude
- weight
- time
- energy
- length
- age
- dimension
- frequency
- physical
- height
- radiation
- [[customer_specific]]

MEDICAL_PROCEDURE

The MEDICAL_PROCEDURE entity type represents medical procedures such as "*biopsy*" or "*angiography*".

Attributes

- norm
- subtype
- icd10
- icd9
- surgical
- related_procedures
- rate_of_success
- physician_to_perform
- region_of_body
- item_removed
- item_implanted
- equipment_needed
- medication_prescribed
- timestamp
- event_date
- monetary_amount
- abstract_flag
- abstract_binary
- [[customer_specific]]

MISC

The MISC entity type allows for the display and handling of miscellaneous items as if they are entities. Users can use this entity type in the same manner.

Attributes

- [[customer_specific]]

NATIONALITY

The NATIONALITY entity type represents the nation or region of origin for a person or an object, such as "*Japanese*" or "*Asian*".

Attributes

- norm
- gender
- country
- region
- source_description
- source_grade
- subtype
 - national_of
 - ethnicity
- [[customer_specific]]

NON_SALIENT_WEB_CONTENT

The NON_SALIENT_WEB_CONTENT entity type represents terms that are frequently found on a website but have no bearing on its content, such as "*downloads*", "*connect on...*", and "*cookie policy*".

Attributes

- norm
- subtype
- [[customer_specific]]

PERCENT

The PERCENT entity type represents percentages. This entity type also includes "per mille", which the extraction process converts to percent automatically.

The word "percent" is normalized to the percent symbol (%) during extraction.

Attributes

- norm
- subtype
- [[customer_specific]]

POLITICAL_AFFILIATION

The POLITICAL_AFFILIATION entity type represents the political affiliation of an entity, such as "*R-AK*" or "*republican*".

Attributes

- norm
- admin_region
- party
- person_affiliated
- [[customer_specific]]

PROFESSION

The PROFESSION entity type indicates the title and profession of an entity, such as "*cashier*" or "*House Majority Whip*".

Attributes

- norm
- subtype
- location
- profession_org
- salary
- reporting_profession
- [[customer_specific]]

PROGRAM

The PROGRAM entity type indicates organized programs, plans, and projects, such as "*Abandoned Land Mine Reclamation Program*", "*Adult Education State Grant Program*", and "*Beach Erosion Control Project*".

Attributes

- norm
- type
- idnum
- url
- program_start_date
- program_end_date
- issuing_organization
- program_status
- program_value
- issuing_person
- program_location
- subtype

- curriculum
- program
- project
- grant
- [[customer_specific]]

QUOTE

The QUOTE type entity indicates and highlights possible quotes of interest by an entity.

Attributes

- norm
- subtype
- [[customer_specific]]

RATING

The RATING entity type represents bond rating scores of the kind found in financial documents, such as "BBB-" and "Lowered to A+ from AA-".

Attributes

- norm
- subtype
- credit_quality
- rating_organization
- grade
- description
- [[customer_specific]]

SALIENT_PHRASE

The SALIENT_PHRASE entity type represents a dynamic entity or phrase that has not been extracted as another entity, but appears in a salient context.

Attributes

- norm
- subtype
- [[customer_specific]]

SCORE

The SCORE entity type represents the number of points an entity received in a competition, its rating, or its grade.

Attributes

- norm
- subtype

- rating
- grade
- ranking
- record
- nomination
- value
- competition_result
- [[customer_specific]]

TICKER_SYMBOL

The TICKER_SYMBOL entity type represents ticker symbols used on financial exchanges, such as "AAPL" or "AZO".

Attributes

- norm
- company (the company represented by the ticker symbol)
- exchange (the exchange on which the company/symbol is traded)
- subtype
- country
- price
- index_name
- index_high
- index_low
- prev_close
- [[customer_specific]]

TRANSIT

The TRANSIT entity type represents transportation facilities such as subway stops, airports, and bus stops.

Attributes

- norm
- subtype
- gaz_id
- dsg
- dsgrank
- dsgfeature
- pc
- country
- province
- admin_region

- lat (latitude in decimal degrees)
- lon (longitude in decimal degrees)
- elevation_m (elevation above sea level in meters)
- source
- region
- subregion
- ufi
- coordinate
- [[customer_specific]]

USER_AGENT

The USER_AGENT entity type represents software user agents such as bots or email readers. The entity is extracted when preceded by an indicator such as "*user agent*:" and contained within quotes.

Attributes

- norm
- subtype
- [[customer_specific]]

Relationships

In i2 TextChart, *relationships* are binary connections between entities found in a single document. TextChart defines relationships in terms of *predicate-subject-object* (PSO) statements.

PSO relationships have an order of precedence: PERSON is the most important entity type, and all other types are subordinate to it. All relationships are reciprocal by default.

Each relationship that TextChart extracts has a predicate from a set of predicate types that are valid for that relationship. The valid set for each relationship is drawn from [the full list of predicate types](#).

PersonToPerson

PersonToPerson relationships are those relationships that connect two persons together. These relationships can be between different people or with the same person who has multiple names.

Predicate types

- acquires_
- disagreed
- govern_
- accused
- complaints
- inform
- select
- alias_of
- dissent
- appointed

- convert
- acknowledge
- alleges
- against
- follows_
- cared_for
- manipulates
- works_
- identified_
- confronted
- burial
- negotiated_with
- employs
- contact
- invested_in
- knows_
- works_with
- donate
- took
- inquire_
- like
- supports_
- competes_with
- communicated_
- discredit
- mandate
- penalize_
- researched
- seen
- kidnapped_
- awarded_
- assists
- advise
- instructs
- crime
- win
- died_from
- enclose
- witnessed

- caused
- emailed
- apprehended
- sponsored
- attack_
- interviewed
- battle
- meet
- trusts
- compensated_
- visited_
- died_from
- united_
- describe
- separated_
- terrified
- criticize
- received_information
- received_legal_assistance
- reported_to
- sexual_relations
- threaten
- surrendered
- abuse
- deceive
- linked_to
- familial_
 - familial_
 - cousin_of
 - child_parent_of
 - grandchild_grandparent_of
 - greatgrandchild_greatgrandparent_of
 - pibling_of
 - nibling_of
 - sibling_of
 - spouse_of
 - related_by_marriage
 - related_to
- [[customer_specific]]

PersonToOrg

PersonToOrg relationships are those relationships that connect a person with an organization. These relationships are *specific relationships*, meaning that this relationship will only be extracted when a predicate type is specified.

Predicate types

- belongs_to
- acquires_
- communicated_
- discredit
- inform
- select
- works_with
- compensated_
- attests
- funded
- negotiated_with
- dispatched
- disagreed
- against
- alleges
- dissent
- threaten
- complaints
- appointed
- surrendered
- confronted
- apprehended
- witnessed
- employs
- contact
- kidnapped_
- issued_
- made_
- follows_
- host
- acknowledge
- accused
- owns
- create

- takes_control
- donate
- consider
- works_
- depart
- knows_
- cared_for
- make_improvements
- inquire_
- penalize_
- invested_in
- failed_
- announce
- works_with
- improve
- formed
- launches
- mandate
- contribute
- appears_
- amplify
- researched
- transform
- assists
- advise
- terrified
- instructs
- access_to
- awarded_
- studies
- win
- removed_from
- monetary_earning
- enclose
- visited_
- works_with
- sells_
- supplied
- emailed

- manages
- united_
- escaped_from
- endorse
- meet
- trusts
- abuse
- deceive
- died_from
- describe
- separated_
- criticize
- received_information
- received_legal_assistance
- reported_to
- identified_
- linked_to
- [[customer_specific]]

PersonToFacility

PersonToFacility relationships are those relationships that connect a person with a facility. These relationships are specific relationships.

Predicate types

- acquires_
- inform
- select
- communicated_
- discredit
- funded
- issued_
- at
- closed
- apprehended
- works_with
- complaints
- confronted
- dissent
- alleges
- threaten

- accused
- compensated_
- employs
- disagreed
- acknowledge
- contact
- cared_for
- made_
- terrified
- owns
- kidnapped_
- donate
- works_
- depart
- make_improvements
- location_of
- invested_in
- announce
- visited_
- move_to
- attack_
- travels_
- appears_
- targets
- researched
- access_to
- operates_in
- enclose
- removed_from
- invade
- sells_
- manages
- escaped_from
- services
- move_from
- meet_at
- damaged
- demolished
- describe

- separated_
- criticize
- received_information
- reported_to
- abuse
- death
- deceive
- linked_to
- [[customer_specific]]

PersonToAddress

PersonToAddress relationships are those relationships that connect a person with a physical address.

Predicate types

- maintains
- belongs_to
- acquires_
- kidnapped_
- manages
- location_of
- services
- works_
- terrified
- move_from
- operates_in
- acknowledge
- meet
- move_to
- improve
- damaged
- knows_
- visited_
- made_
- demolished
- access_to
- owns
- depart
- make_improvements
- removed_from
- criticize

- linked_to
- [[customer_specific]]

PersonToPlace

PersonToPlace relationships are those relationships that connect a person with a place. These relationships are specific relationships.

Predicate types

- belongs_to
- death
- travels_
- at
- accused
- govern_
- dissent
- surrendered
- dispatched
- threaten
- funded
- apprehended
- from_
- alleges
- escaped_from
- location_of
- against
- appears_
- disagreed
- appointed
- complaints
- takes_control
- targets
- damaged
- acknowledge
- researched
- burial
- studies
- terrified
- knows_
- operates_in
- depart

- kidnapped_
- monetary_earning
- seen
- discover
- invade
- birth
- citizen_of
- visited_
- move_from
- meet
- move_to
- demolished
- attack_
- battle
- describe
- communicated_
- discredit
- separated_
- criticize
- works_
- embargo
- abuse
- deceive
- identified_
- linked_to
- [[customer_specific]]

PersonToWeapon

The PersonToWeapon relationship represents relationships that connect a person with a physical or virtual weapon.

Predicate types

- discover
- acquires_
- expert_on
- location_of
- sends_
- surrendered
- made_
- attack_

- authorized
- researched
- lost
- gave_
- compensated_
- access_to
- owns
- has
- died_from
- acknowledge
- witnessed
- took
- inquire_
- sells_
- seen
- invested_in
- died_from
- uses
- dispose
- describe
- criticize
- took
- linked_to
- [[customer_specific]]

PersonToDrug

The PersonToDrug relationship represents relationships between people and legal or illicit drugs.

Predicate types

- acquires_
- expert_on
- authorized
- gave_
- sends_
- alleges
- complaints
- appears_
- made_
- researched
- branded

- access_to
- acknowledge
- has
- seen
- consider
- sells_
- died_from
- affected_by
- discover
- took
- inquire_
- invested_in
- provider_of
- uses
- dispose
- describe
- advertise
- criticize
- treating
- apprehended
- supplied
- survived_
- [[customer_specific]]

PersonToChemical

PersonToChemical relationships link persons to chemicals.

Predicate types

- researched
- acquires_
- sells_
- expert_on
- access_to
- gave_
- uses
- dispose
- has
- made_
- died_from
- criticize

- treating
- [[customer_specific]]

PersonToConveyance

The PersonToConveyance relationship represents relationships between persons and methods of conveyance, including land, air, sea, and space vehicles.

Predicate types

- took
- inquire_
- authorized
- gave_
- complaints
- canceled
- funded
- is_evaluating
- death
- acquires_
- sells_
- made_
- sends_
- attack_
- researched
- branded
- acknowledge
- demolished
- dispatched
- access_to
- uses
- seen
- dispose
- has
- describe
- consider
- depart
- launches
- make_improvements
- separated_
- criticize
- travels_

- [[customer_specific]]

PersonToCrime

The PersonToCrime relationship denotes relationships between persons and crimes.

Predicate types

- witnessed
- authorized
- inquire_
- mandate
- belongs_to
- funded
- penalize_
- accused
- conviction_
- threaten
- attack_
- researched
- assists
- compensated_
- charged_with
- describe
- affected_by
- commits
- seen
- criticize
- denied
- involvement
- suspected
- alleges
- prevented_
- participated_in
- survived_
- plotted_
- absolved_
- linked_to
- [[customer_specific]]

PersonToDisease

The PersonToDisease relationship denotes relationships between persons and diseases.

Predicate types

- researched
- expert_on
- separated_
- appears_
- gave_
- afflicted_with
- has
- describe
- acknowledge
- affected_by
- communicated_
- died_from
- criticize
- suspected
- studies
- isolate
- originated_
- variant_of
- treating
- survived_
- immunized_
- [[customer_specific]]

PersonToProduct

The PersonToProduct relationship denotes relationships between persons and commercial products.

Predicate types

- acquires_
- select
- authorized
- funded
- unveil
- canceled
- expert_on
- complaints
- contribute
- sends_
- appears_
- made_

- researched
- alleges
- acknowledge
- branded
- compensated_
- access_to
- has
- consider
- sells_
- took
- inquire_
- invested_in
- guaranteed
- announce
- damaged
- uses
- dispose
- describe
- advertise
- criticize
- donate
- [[customer_specific]]

PersonToMedical_Procedure

The PersonToMedical_Procedure relationship represents relationships between a person and a medical procedure.

Predicate types

- discover
- inquire_
- authorized
- unveil
- expert_on
- perform
- contribute
- received
- researched
- assists
- compensated_
- studies

- create
- has
- acknowledge
- consider
- affected_by
- undergo
- died_from
- criticize
- treating
- linked_to
- [[customer_specific]]

PersonToEvent

The PersonToEvent relationship represents relationships between persons and events.

Predicate types

- implements
- communicated_
- inform
- travels_
- funded
- discredit
- dissent
- unveil
- contribute
- attended
- appears_
- complaints
- works_with
- researched
- visited_
- assists
- advise
- employs
- contact
- instructs
- host
- depart
- win
- died_from

- witnessed
- inquire_
- manages
- sponsored
- participated_in
- competes_with
- attack_
- describe
- affected_by
- launches
- removed_from
- criticize
- initiated
- involvement
- compensated_
- linked_to
- [[customer_specific]]

PersonToPublication

The PersonToPublication relationships are those relationships that connect a person with a publication.

Predicate types

- communicated_
- inform
- subject_of
- contribute
- accused
- complaints
- funded
- discredit
- disagreed
- against
- alleges
- signed
- sponsored
- mentioned_in
- sends_
- appears_
- acknowledge
- published_in

- branded
- referenced
- contact
- instructs
- author_of
- has
- sells_
- affected_by
- works_
- advertise
- criticize
- denied
- submitted
- linked_to
- [[customer_specific]]

PersonToEmail

The PersonToEmail relationship represents the relationship between a person and an email address.

Predicate types

- discover
- belongs_to
- inform
- originated_
- subject_of
- sells_
- emailed
- sends_
- opened
- received
- mentioned_in
- location_of
- appears_
- communicated_
- identified_by
- contact
- author_of
- access_to
- uses
- has

- linked_to
- [[customer_specific]]

PersonToSocial

PersonToSocial relationships are those relationships between a person and a social media identifier.

Predicate types

- maintains
- belongs_to
- communicated_
- inform
- disagreed
- confronted
- complaints
- acknowledge
- subject_of
- accused
- alleges
- caused
- manages
- mentioned_in
- appears_
- identified_by
- referenced
- contact
- follows_
- uses
- affected_by
- criticize
- linked_to
- [[customer_specific]]

PersonToPhone

PersonToPhone relationships are those relationships that connect a person to a phone number.

Predicate types

- belongs_to
- inform
- communicated_
- identified_by
- originated_

- contact
- uses
- location_of
- has
- linked_to
- [[customer_specific]]

PersonToURL

PersonToURL relationships are those relationships that connect a person to a website or IP address.

Predicate types

- maintains
- belongs_to
- acquires_
- inform
- identified_by
- create
- owns
- appears_
- launches
- linked_to
- [[customer_specific]]

PersonToContact_Block

The PersonToContact_Block relationship represents relationships between a person and a contact block.

Predicate types

- mentioned_in
- contact
- [[customer_specific]]

PersonToGeocoordinate

The PersonToGeocoordinate relationship represents relationships between a person and a geocoordinate.

Predicate types

- location_of
- appears_
- [[customer_specific]]

PersonToMoney

PersonToMoney relationships are those relationships that connect a person to a numeric amount of money.

Predicate types

- took
- inquire_
- belongs_to
- penalize_
- made_
- sends_
- received
- gave_
- guaranteed
- monetary_earning
- laundered
- donate
- gain_
- loss
- acquires_
- lost
- compensated_
- access_to
- funded
- invested_in
- has
- sells_
- deceive
- win
- [[customer_specific]]

PersonToPercent

The PersonToPercent relationship represents a relationship between a person and a percentage.

Predicate types

- [[customer_specific]]

PersonToMeasure

The PersonToMeasure relationship connects a person to a numeric measure and unit.

Predicate types

- identified_

- death
- age_of
- weight_of
- height_of
- [[customer_specific]]

PersonToIDNUM

PersonToIDNUM relationships are those relationships that connect a person to an identification number.

Predicate types

- belongs_to
- awarded_
- identified_by
- referenced
- compensated_
- has
- [[customer_specific]]

PersonToCitation

The PersonToCitation relationship denotes a relationship between a person and a legal citation number.

Predicate types

- referenced
- author_of
- mentioned_in
- [[customer_specific]]

PersonToDNA

The PersonToDNA relationship represents those relationships that connect a person to a DNA sequence.

Predicate types

- discover
- belongs_to
- expert_on
- appears_
- convert
- researched
- isolate
- transform
- identified_
- identified_by

- compensated_
- studies
- ethnic_group
- afflicted_with
- has
- affected_by
- communicated_
- died_from
- is_evaluating
- linked_to
- [[customer_specific]]

PersonToHashtag

The PersonToHashtag relationship represents those relationships that connect a person to a social media hashtag.

Predicate types

- belongs_to
- referenced
- mentioned_in
- sends_
- communicated_
- criticize
- linked_to
- [[customer_specific]]

PersonToTimestamp

The PersonToTimestamp relationship represents a connection between a person and a date & time expression.

Predicate types

- death
- birth
- conviction_
- burial
- meet
- attack_
- apprehended
- linked_to
- [[customer_specific]]

PersonToProgram

The PersonToProgram relationship represents a connection between a person and a program, plan, or project.

Predicate types

- belongs_to
- inform
- contribute
- appears_
- funded
- amplify
- works_with
- discredit
- against
- assists
- compensated_
- advise
- contact
- instructs
- access_to
- donate
- works_
- depart
- removed_from
- inquire_
- emailed
- manages
- invested_in
- describe
- affected_by
- formed
- launches
- complaints
- criticize
- denied
- involvement
- linked_to
- [[customer_specific]]

PersonToPunitive_Measure

PersonToPunitive_Measure relationships are those relationships that connect a person with a punitive measure.

Predicate types

- witnessed
- implements
- amount
- mandate
- date_of
- penalize_
- against
- death
- perform
- expert_on
- conviction_
- received
- died_from
- enforce
- has
- afflicted_with
- affected_by
- criticize
- [[customer_specific]]

PersonToNationality

The PersonToNationality relationship represents a connection between a person and a nationality.

Predicate types

- belongs_to
- works_with
- united_
- communicated_
- citizen_of
- apprehended
- manipulates
- disagreed
- identified_
- compensated_
- employs
- seen

- against
- ethnic_group
- attack_
- access_to
- knows_
- works_
- creed
- monetary_earning
- criticize
- sexual_relations
- abuse
- deceive
- linked_to
- [[customer_specific]]

PersonToProfession

The PersonToProfession relationship represents a connection between a person and a profession.

Predicate types

- inquire_
- inform
- select
- manages
- contribute
- works_with
- disagreed
- announce
- trusts
- advise
- employs
- contact
- against
- instructs
- describe
- consider
- works_
- depart
- communicated_
- removed_from
- criticize

- [[customer_specific]]

PersonToPolitical_Affiliation

The PersonToPolitical_Affiliation relationship represents a connection between a person and a political affiliation.

Predicate types

- belongs_to
- inform
- select
- complaints
- subject_of
- govern_
- disagreed
- convert
- amplify
- works_with
- assists
- compensated_
- negotiated_with
- advise
- contact
- instructs
- has
- works_
- depart
- penalize_
- sponsored
- participated_in
- announce
- supports_
- formed
- separated_
- criticize
- discredit
- linked_to
- [[customer_specific]]

PersonToTransit

The PersonToTransit relationship represents a connection between a person and a transit entity.

Predicate types

- took
- travels_
- improve
- manages
- access_to
- location_of
- attack_
- appears_
- made_
- works_
- make_improvements
- [[customer_specific]]

PersonToGene

The PersonToGene relationship represents a connection between a person and a gene entity.

Predicate types

- discover
- like
- expert_on
- appears_
- convert
- targets
- isolate
- researched
- transform
- identified_
- identified_by
- received
- gave_
- damaged
- studies
- ethnic_group
- afflicted_with
- has
- affected_by
- communicated_
- died_from
- is_evaluating

- linked_to
- [[customer_specific]]

PersonToImplement

The PersonToImplement relationship represents a connection between a person and an implement.

Predicate types

- took
- funded
- discover
- belongs_to
- acquires_
- sells_
- made_
- apprehended
- sends_
- access_to
- owns
- died_from
- uses
- invested_in
- has
- separated_
- linked_to
- [[customer_specific]]

PersonToNon_Salient_Web_Content

The PersonToNon_Salient_Web_Content relationship represents a connection between a person and non-salient web content.

Predicate types

- participated_in
- takes_action
- [[customer_specific]]

PersonToIdeology

The PersonToIdeology relationship represents a connection between a person and an ideology.

Predicate types

- follows_
- belongs_to
- expert_on

- participated_in
- convert
- amplify
- works_with
- against
- researched
- identified_
- takes_action
- instructs
- commits
- depart
- creed
- separated_
- abuse
- criticize
- [[customer_specific]]

PersonToFile_Name

The PersonToFile_Name relationship represents a connection between a person and a file name.

Predicate types

- emailed
- access_to
- create
- mentioned_in
- sends_
- [[customer_specific]]

PersonToAward

The PersonToAward relationship represents a connection between a person and an award.

Predicate types

- acquires_
- belongs_to
- received
- has
- win
- lost
- criticize
- [[customer_specific]]

PersonToScore

The PersonToScore relationship represents a connection between a person and a score.

Predicate types

- maintains
- acquires_
- received
- has
- [[customer_specific]]

PersonToBiometric

The PersonToBiometric relationship represents a connection between a person and a biometric entity.

Predicate types

- linked_to
- [[customer_specific]]

PersonToGeneric

The PersonToGeneric relationship represents a connection between a person and a generic entity.

Predicate types

- linked_to
- emailed
- alleges
- [[customer_specific]]

OrgToOrg

OrgToOrg relationships are those relationships that connect an organization with another organization.

Predicate types

- acquires_
- belongs_to
- inform
- select
- against
- funded
- originated_
- complaints
- dissent
- accused
- alleges
- disagreed
- alias_of

- compensated_
- discredit
- acknowledge
- threaten
- negotiated_with
- dispatched
- takes_action
- employs
- contact
- owns
- create
- works_with
- donate
- consider
- depart
- inquire_
- penalize_
- made_
- invested_in
- competes_with
- formed
- awarded_
- mandate
- contribute
- amplify
- surrendered
- assists
- advise
- takes_control
- win
- monetary_earning
- sells_
- supplied
- manages
- united_
- sponsored
- endorse
- battle
- contracted_with

- meet
- trusts
- describe
- merger
- separated_
- criticize
- received_information
- received_legal_assistance
- reported_to
- abuse
- deceive
- linked_to
- [[customer_specific]]

OrgToFacility

The OrgToFacility relationship connects an organization with a facility.

Predicate types

- acquires_
- belongs_to
- funded
- competes_with
- govern_
- inform
- authorized
- select
- complaints
- threaten
- dissent
- compensated_
- disagreed
- negotiated_with
- takes_action
- acknowledge
- accused
- contact
- alleges
- made_
- owns
- has

- donate
- depart
- contracted_with
- make_improvements
- invested_in
- opened
- announce
- works_with
- move_to
- improve
- location_of
- attack_
- unveil
- damaged
- transform
- operates_in
- takes_control
- enclose
- maintains
- invade
- sells_
- manages
- move_from
- services
- move_from
- meet
- demolished
- closed
- uses
- describe
- separated_
- criticize
- merger
- received_information
- received_legal_assistance
- reported_to
- abuse
- deceive
- linked_to

- [[customer_specific]]

OrgToAddress

The OrgToAddress relationship represents relationships between organizations and physical addresses.

Predicate types

- belongs_to
- acquires_
- location_of
- services
- damaged
- move_from
- operates_in
- meet
- acknowledge
- move_to
- made_
- has
- received_information
- linked_to
- [[customer_specific]]

OrgToPlace

The OrgToPlace relationship represents a connection between an organization and a place.

Predicate types

- invade
- belongs_to
- originated_
- funded
- travels_
- dispatched
- confronted
- govern_
- dissent
- alleges
- discredit
- complaints
- against
- move_from
- accused

- threaten
- location_of
- contracted_with
- mentioned_in
- disagreed
- acknowledge
- attack_
- invested_in
- services
- founded_
- terrified
- move_from
- operates_in
- battle
- region_served
- meet
- awarded_
- move_to
- researched
- monetary_earning
- enclose
- separated_
- criticize
- demolished
- embargo
- surrendered
- abuse
- deceive
- identified_
- linked_to
- [[customer_specific]]

OrgToWeapon

OrgToWeapon relationships are those relationships that connect organizations to weapons.

Predicate types

- took
- acquires_
- sells_
- made_

- funded
- gave_
- authorized
- invested_in
- sends_
- appears_
- compensated_
- lost
- takes_action
- acknowledge
- owns
- uses
- dispose
- has
- describe
- criticize
- linked_to
- [[customer_specific]]

OrgToDrug

The OrgToDrug relationship represents a connection between an organization and a legal or illicit drug.

Predicate types

- took
- acquires_
- sells_
- researched
- funded
- made_
- authorized
- complaints
- ceased
- invested_in
- alleges
- gave_
- appears_
- branded
- compensated_
- uses
- dispose

- has
- describe
- consider
- acknowledge
- advertise
- criticize
- provider_of
- apprehended
- supplied
- [[customer_specific]]

OrgToChemical

The OrgToChemical relationship represents a connection between an organization and a chemical.

Predicate types

- acquires_
- sells_
- uses
- sends_
- appears_
- gave_
- dispose
- has
- describe
- made_
- criticize
- [[customer_specific]]

OrgToConveyance

OrgToConveyance relationships are those relationships that connect an organization to a method of conveyance.

Predicate types

- witnessed
- took
- funded
- discover
- is_evaluating
- authorized
- acquires_
- complaints

- dispatched
- ceased
- sells_
- canceled
- made_
- gave_
- manages
- sends_
- acknowledge
- appears_
- branded
- attack_
- owns
- died_from
- uses
- dispose
- has
- describe
- consider
- launches
- criticize
- [[customer_specific]]

OrgToCrime

The OrgToCrime relationship represents relationships between an organization and a criminal offense.

Predicate types

- assists
- compensated_
- charged_with
- funded
- authorized
- commits
- acknowledge
- denied
- involvement
- suspected
- alleges
- prevented_
- threaten

- compensated_
- attack_
- absolved_
- plotted_
- participated_in
- penalize_
- involvement
- linked_to
- [[customer_specific]]

OrgToDisease

The OrgToDisease relationship represents a connection between an organization and a disease.

Predicate types

- researched
- expert_on
- gave_
- describe
- accused
- communicated_
- criticize
- battle
- targets
- treating
- studies
- [[customer_specific]]

OrgToProduct

The OrgToProduct relationship represents a connection between an organization and a commercial product.

Predicate types

- took
- acquires_
- canceled
- authorized
- select
- funded
- alleges
- complaints
- sells_

- made_
- ceased
- sends_
- appears_
- guaranteed
- amplify
- announce
- researched
- branded
- acknowledge
- uses
- dispose
- has
- describe
- consider
- launches
- advertise
- criticize
- donate
- supplied
- [[customer_specific]]

OrgToImplement

The OrgToImplement relationship represents relationships between an organization and an implement.

Predicate types

- discover
- belongs_to
- acquires_
- supplied
- made_
- unveil
- expert_on
- apprehended
- sends_
- appears_
- researched
- provider_of
- access_to
- owns

- studies
- invested_in
- has
- make_improvements
- funded
- linked_to
- [[customer_specific]]

OrgToFinancial_Index

The OrgToFinancial_Index relationship represents relationships between an organization and a financial index.

Predicate types

- ranks
- tracks
- criticize
- [[customer_specific]]

OrgToTicker_Symbol

The OrgToTicker_Symbol relationship represents relationships between an organization and a ticker symbol.

Predicate types

- uses
- tracks
- has
- [[customer_specific]]

OrgToMedical_Procedure

The OrgToMedical_Procedure relationship represents relationships between an organization and a medical procedure.

Predicate types

- compensated_
- uses
- describe
- consider
- is_evaluating
- criticize
- [[customer_specific]]

OrgToEvent

OrgToEvent relationships represent those relationships that connect an organization to an event.

Predicate types

- implements
- authorized
- inform
- assists
- contact
- host
- funded
- attack_
- describe
- depart
- launches
- works_with
- announce
- criticize
- initiated
- involvement
- participated_in
- compensated_
- conclude
- studies
- affected_by
- [[customer_specific]]

OrgToPublication

OrgToPublication relationships represent a connection between an organization and a publication.

Predicate types

- inform
- branded
- contact
- authorized
- owns
- complaints
- alleges
- funded
- mentioned_in
- disagreed
- sends_
- sells_

- advertise
- published_in
- criticize
- denied
- submitted
- [[customer_specific]]

OrgToEmail

The OrgToEmail relationship represents a relationship between an organization and an email address.

Predicate types

- belongs_to
- inform
- originated_
- emailed
- sends_
- received
- mentioned_in
- opened
- location_of
- communicated_
- contact
- access_to
- linked_to
- [[customer_specific]]

OrgToSocial

The OrgToSocial relationship represents a connection between an organization and a social media identifier.

Predicate types

- belongs_to
- inform
- contact
- confronted
- complaints
- disagreed
- acknowledge
- criticize
- follows_
- linked_to

- [[customer_specific]]

OrgToPhone

The OrgToPhone relationship represents a connection between an organization and a phone number.

Predicate types

- belongs_to
- inform
- communicated_
- identified_by
- originated_
- contact
- uses
- has
- linked_to
- [[customer_specific]]

OrgToURL

OrgToURL relationships are those relationships that represent a connection between an organization and a website or IP address.

Predicate types

- maintains
- belongs_to
- acquires_
- inform
- identified_by
- create
- owns
- launches
- linked_to
- [[customer_specific]]

OrgToGeocoordinate

The OrgToGeocoordinate relationship represents a connection between an organization and a geocoordinate.

Predicate types

- location_of
- [[customer_specific]]

OrgToMoney

OrgToMoney relationships are those relationships that represent a connection between an organization and a numeric amount of money.

Predicate types

- took
- belongs_to
- govern_
- is_evaluating
- ceased
- penalize_
- gave_
- manages
- sends_
- donate
- received
- guaranteed
- awarded_
- laundered
- gain_
- price_
- loss
- monetary_earning
- acquires_
- value_of
- funded
- invested_in
- compensated_
- has
- sells_
- deceive
- [[customer_specific]]

OrgToPercent

The OrgToPercent relationship represents a connection between an organization and a percentage.

Predicate types

- gain_
- decrease_to
- owns
- guaranteed

- announce
- [[customer_specific]]

OrgToNationality

The OrgToNationality relationship represents a connection between an organization and a nation.

Predicate types

- belongs_to
- works_with
- united_
- communicated_
- manipulates
- region_served
- identified_
- compensated_
- employs
- commits
- kidnapped_
- access_to
- works_
- monetary_earning
- criticize
- battle
- abuse
- deceive
- linked_to
- [[customer_specific]]

OrgToProfession

The OrgToProfession relationship represents a connection between an organization and a profession.

Predicate types

- select
- united_
- contribute
- appears_
- works_with
- announce
- trusts
- kidnapped_
- negotiated_with

- employs
- contact
- consider
- formed
- works_
- depart
- criticize
- [[customer_specific]]

OrgToMeasure

OrgToMeasure relationships are those relationships that denote a connection between an organization and a numeric measure.

Predicate types

- age_of
- announce
- [[customer_specific]]

OrgToIDNUM

The OrgToIDNUM relationship represents a connection between an organization and an identification number.

Predicate types

- belongs_to
- awarded_
- identified_by
- compensated_
- ein
- has
- sic
- [[customer_specific]]

OrgToCitation

The OrgToCitation relationship represents relationships between organizations and legal citation numbers.

Predicate types

- mentioned_in
- referenced
- [[customer_specific]]

OrgToHashtag

The OrgToHashtag relationship represents those relationships that connect an organization to a social media hashtag.

Predicate types

- belongs_to
- referenced
- mentioned_in
- linked_to
- [[customer_specific]]

OrgToTimestamp

The OrgToTimestamp relationship represents a connection between an organization name and a date & time expression.

Predicate types

- founded_
- failed_
- formed
- linked_to
- funded
- [[customer_specific]]

OrgToProgram

The OrgToProgram relationship represents a connection between an organization and a program, project, or plan.

Predicate types

- manages
- invested_in
- acquires_
- works_with
- assists
- compensated_
- negotiated_with
- contact
- describe
- donate
- affected_by
- formed
- depart
- launches

- criticize
- denied
- involvement
- funded
- [[customer_specific]]

OrgToPunitive_Measure

OrgToPunitive_Measure relationships represent a connection between an organization and a punitive measure.

Predicate types

- implements
- amount
- mandate
- penalize_
- takes_action
- compensated_
- enforce
- has
- afflicted_with
- affected_by
- criticize
- [[customer_specific]]

OrgToPolitical_Affiliation

OrgToPolitical_Affiliation relationships represent a connection between an organization and a political party.

Predicate types

- govern_
- inform
- select
- penalize_
- sponsored
- amplify
- works_with
- announce
- assists
- compensated_
- negotiated_with
- contact
- depart

- criticize
- linked_to
- [[customer_specific]]

OrgToTransit

OrgToTransit relationships represent a connection between an organization and a transit entity.

Predicate types

- closed
- location_of
- [[customer_specific]]

OrgToDNA

OrgToDNA relationships represent a connection between an organization and a DNA entity.

Predicate types

- discover
- expert_on
- invested_in
- targets
- manipulates
- researched
- isolate
- transform
- compensated_
- create
- studies
- uses
- communicated_
- monetary_earning
- [[customer_specific]]

OrgToGene

OrgToGene relationships represent a connection between an organization and a gene entity.

Predicate types

- discover
- made_
- expert_on
- invested_in
- convert
- targets

- manipulates
- isolate
- researched
- transform
- compensated_
- create
- studies
- uses
- communicated_
- monetary_earning
- linked_to
- [[customer_specific]]

OrgToIdeology

OrgToIdeology relationships represent a connection between an organization and an ideology.

Predicate types

- compensated_
- owns
- create
- afflicted_with
- conviction_
- formed
- creed
- abuse
- criticize
- [[customer_specific]]

OrgToAward

OrgToAward relationships represent a connection between an organization and an award.

Predicate types

- acquires_
- belongs_to
- awarded_
- received
- sends_
- has
- win
- criticize
- [[customer_specific]]

OrgToScore

OrgToScore relationships represent a connection between an organization and a score.

Predicate types

- acquires_
- received
- has
- [[customer_specific]]

OrgToRating

OrgToRating relationships represent a connection between an organization and a rating.

Predicate types

- acquires_
- received
- has
- [[customer_specific]]

OrgToGeneric

OrgToGeneric relationships represent a connection between an organization and a generic entity.

Predicate types

- [[customer_specific]]

FacilityToFacility

FacilityToFacility relationships are those relationships that connect a facility with another facility.

Predicate types

- move_from
- move_to
- location_of
- competes_with
- merger
- received_information
- [[customer_specific]]

FacilityToAddress

FacilityToAddress relationships are those relationships that connect a facility with a physical address.

Predicate types

- move_from
- move_to
- location_of
- operates_in

- [[customer_specific]]

FacilityToPlace

The FacilityToPlace relationship represents a connection between a facility and a place.

Predicate types

- move_from
- originated_
- move_to
- location_of
- operates_in
- monetary_earning
- contracted_with
- identified_
- linked_to
- [[customer_specific]]

FacilityToWeapon

FacilityToWeapon relationships are those relationships that connect facilities to weapons.

Predicate types

- acquires_
- sells_
- location_of
- uses
- appears_
- made_
- [[customer_specific]]

FacilityToDrug

The FacilityToDrug relationship represents a connection between a facility and a legal or illicit drug.

Predicate types

- acquires_
- sells_
- supplies
- location_of
- uses
- sends_
- appears_
- made_
- [[customer_specific]]

FacilityToChemical

The FacilityToChemical relationship represents a connection between a facility and a chemical.

Predicate types

- acquires_
- sells_
- supplies
- location_of
- uses
- sends_
- appears_
- made_
- [[customer_specific]]

FacilityToConveyance

FacilityToConveyance relationships are those relationships that connect a facility to a method of conveyance.

Predicate types

- supplies
- location_of
- sends_
- canceled
- appears_
- made_
- launches
- donate
- [[customer_specific]]

FacilityToCrime

The FacilityToCrime relationship represents relationships between a named facility and a criminal offense.

Predicate types

- manages
- uses
- location_of
- denied
- enforce
- penalize_
- threaten
- witnessed

- accused
- linked_to
- [[customer_specific]]

FacilityToDisease

The FacilityToDisease relationship represents a connection between a facility and a disease.

Predicate types

- linked_to
- researched
- caused
- expert_on
- gave_
- describe
- battle
- accused
- originated_
- communicated_
- criticize
- targets
- treating
- [[customer_specific]]

FacilityToImplement

The FacilityToImplement relationship represents a connection between a facility and an implement.

Predicate types

- sells_
- unveil
- create
- uses
- sponsored
- appears_
- has
- made_
- linked_to
- [[customer_specific]]

FacilityToProduct

The FacilityToProduct relationship represents a connection between a facility and a commercial product.

Predicate types

- acquires_
- sells_
- supplies
- canceled
- location_of
- uses
- sends_
- appears_
- has
- made_
- donate
- [[customer_specific]]

FacilityToMedical_Procedure

The FacilityToMedical_Procedure relationship represents relationships between a facility and a medical procedure.

Predicate types

- location_of
- linked_to
- perform
- [[customer_specific]]

FacilityToEvent

FacilityToEvent relationships represent those relationships that connect a facility to a named event.

Predicate types

- move_from
- move_to
- host
- funded
- location_of
- affected_by
- depart
- is_evaluating
- launches
- works_with
- announce
- initiated
- involvement
- [[customer_specific]]

FacilityToPublication

FacilityToPublication relationships are those relationships that connect a facility with a publication.

Predicate types

- identified_by
- mentioned_in
- sends_
- published_in
- submitted
- [[customer_specific]]

FacilityToEmail

The FacilityToEmail relationship represents a relationship between a facility and an email address.

Predicate types

- originated_
- emailed
- mentioned_in
- location_of
- [[customer_specific]]

FacilityToSocial

The FacilityToSocial relationship represents a connection between a facility and a social media identifier.

Predicate types

- mentioned_in
- [[customer_specific]]

FacilityToPhone

The FacilityToPhone relationship represents a connection between a facility and a phone number.

Predicate types

- belongs_to
- communicated_
- identified_by
- originated_
- location_of
- has
- linked_to
- [[customer_specific]]

FacilityToURL

FacilityToURL relationships are those relationships that represent a connection between a facility and a website or IP address.

Predicate types

- belongs_to
- linked_to
- [[customer_specific]]

FacilityToGeocoordinate

The FacilityToGeocoordinate relationship represents relationships between a facility and a geocoordinate.

Predicate types

- location_of
- [[customer_specific]]

FacilityToMoney

FacilityToMoney relationships are those relationships that connect a facility to a numeric amount of money.

Predicate types

- loss
- acquires_
- penalize_
- lost
- compensated_
- received
- appears_
- has
- gain_
- donate
- [[customer_specific]]

FacilityToPercent

The FacilityToPercent relationship represents a relationship between a facility and a percentage.

Predicate types

- [[customer_specific]]

FacilityToNationality

The FacilityToNationality relationship represents a relationship between a facility and a nationality.

Predicate types

- discover
- belongs_to
- acquires_
- damaged
- works_
- operates_in
- made_
- attack_
- has
- takes_control
- linked_to
- [[customer_specific]]

FacilityToProfession

The FacilityToProfession relationship represents a relationship between a facility and a profession.

Predicate types

- works_
- [[customer_specific]]

FacilityToIdeology

The FacilityToIdeology relationship represents a relationship between a facility and an ideology.

Predicate types

- move_from
- acquires_
- move_to
- demolished
- made_
- location_of
- attack_
- opened
- [[customer_specific]]

FacilityToMeasure

The FacilityToMeasure relationship represents a relationship between a facility and a numeric measure.

Predicate types

- age_of
- height_of
- [[customer_specific]]

FacilityToIDNUM

The FacilityToIDNUM relationship represents a connection between a facility and an identification number.

Predicate types

- awarded_
- identified_by
- compensated_
- ein
- [[customer_specific]]

FacilityToCitation

The FacilityToCitation relationship represents a connection between a facility and a legal citation number.

Predicate types

- mentioned_in
- referenced
- [[customer_specific]]

FacilityToHashtag

The FacilityToHashtag relationship represents those relationships that connect a facility to a social media hashtag.

Predicate types

- belongs_to
- linked_to
- referenced
- [[customer_specific]]

FacilityToTimestamp

The FacilityToTimestamp relationship represents a connection between a facility and a date & time expression.

Predicate types

- linked_to
- [[customer_specific]]

FacilityToProgram

The FacilityToProgram relationship represents a connection between a facility and a program, project, or plan.

Predicate types

- belongs_to
- acquires_

- manages
- location_of
- opened
- move_from
- compensated_
- move_to
- made_
- demolished
- access_to
- owns
- operates_in
- depart
- make_improvements
- linked_to
- [[customer_specific]]

FacilityToPunitive_Measure

FacilityToPunitive_Measure relationships are those relationships that connect a facility with a punitive measure.

Predicate types

- mandate
- affected_by
- [[customer_specific]]

FacilityToPolitical_Affiliation

FacilityToPolitical_Affiliation relationships are those relationships that connect a facility with a political party.

Predicate types

- works_
- belongs_to
- has
- [[customer_specific]]

FacilityToTransit

FacilityToTransit relationships are those relationships that connect a facility with a transit entity.

Predicate types

- location_of
- [[customer_specific]]

FacilityToDNA

FacilityToDNA relationships are those relationships that connect a facility with a DNA entity.

Predicate types

- discover
- location_of
- appears_
- [[customer_specific]]

FacilityToGene

FacilityToGene relationships are those relationships that connect a facility with a gene entity.

Predicate types

- discover
- isolate
- transform
- made_
- conclude
- create
- convert
- linked_to
- [[customer_specific]]

FacilityToAward

FacilityToAward relationships are those relationships that connect a facility with an award.

Predicate types

- acquires_
- received
- has
- win
- lost
- awarded_
- [[customer_specific]]

FacilityToScore

FacilityToScore relationships are those relationships that connect a facility with a score.

Predicate types

- acquires_
- received
- has
- [[customer_specific]]

AddressToAddress

AddressToAddress relationships are those relationships that connect a physical address with another physical address.

Predicate types

- [[customer_specific]]

AddressToPlace

The AddressToPlace relationship represents a connection between a physical address and a place.

Predicate types

- location_of
- operates_in
- [[customer_specific]]

AddressToGeocoordinate

The AddressToGeocoordinate relationship represents a connection between a physical address and a geocoordinate.

Predicate types

- location_of
- [[customer_specific]]

AddressToPhone

The AddressToPhone relationship represents a connection between a physical address and a phone number.

Predicate types

- belongs_to
- identified_by
- originated_
- location_of
- has
- linked_to
- [[customer_specific]]

AddressToConveyance

The AddressToConveyance relationship represents a connection between a physical address and a conveyance.

Predicate types

- location_of
- sends_
- appears_
- [[customer_specific]]

AddressToMoney

The AddressToMoney relationship represents a connection between a physical address and money.

Predicate types

- invested_in
- penalize
- value_of
- sells_
- [[customer_specific]]

AddressToCrime

The AddressToCrime relationship represents a connection between a physical address and a crime.

Predicate types

- location_of
- affected_by
- linked_to
- [[customer_specific]]

AddressToEvent

The AddressToEvent relationship represents a connection between a physical address and an event.

Predicate types

- location_of
- initiated
- [[customer_specific]]

AddressToPublication

The AddressToPublication relationship represents a connection between a physical address and a publication.

Predicate types

- location_of
- sends_
- made_
- [[customer_specific]]

AddressToEmail

The AddressToEmail relationship represents a connection between a physical address and an email address.

Predicate types

- originated_
- location_of

- mentioned_in
- [[customer_specific]]

AddressToProgram

The AddressToProgram relationship represents a connection between a physical address and a program, project, or plan.

Predicate types

- move_from
- move_to
- location_of
- linked_to
- [[customer_specific]]

AddressToImplement

The AddressToImplement relationship represents a connection between a physical address and an implement.

Predicate types

- discover
- sends_
- location_of
- linked_to
- made_
- sells_
- [[customer_specific]]

AddressToNationality

The AddressToNationality relationship represents a connection between a physical address and a nationality.

Predicate types

- move_from
- operates_in
- move_to
- location_of
- [[customer_specific]]

AddressToPolitical_Affiliation

The AddressToPolitical_Affiliation relationship represents a connection between a physical address and a political party.

Predicate types

- works_

- belongs_to
- location_of
- linked_to
- [[customer_specific]]

AddressToWeapon

The AddressToWeapon relationship represents a connection between a physical address and a weapon.

Predicate types

- discover
- location_of
- sends_
- appears_
- made_
- sells_
- [[customer_specific]]

AddressToDrug

AddressToDrug relationships are those relationships that connect an address with a drug.

Predicate types

- discover
- location_of
- sends_
- appears_
- made_
- sells_
- [[customer_specific]]

AddressToIDNUM

The AddressToIDNUM relationship represents a connection between a physical address and an identification number.

Predicate types

- linked_to
- [[customer_specific]]

AddressToIdeology

The AddressToIdeology relationship represents a connection between a physical address and an ideology.

Predicate types

- move_from

- move_to
- location_of
- [[customer_specific]]

PlaceToPlace

The PlaceToPlace relationship represents a connection between a place and another place.

Predicate types

- battle
- belongs_to
- confronted
- govern_
- location_of
- has
- complaints
- competes_with
- surrendered
- alleges
- disagreed
- criticize
- demolished
- embargo
- linked_to
- [[customer_specific]]

PlaceToWeapon

PlaceToWeapon relationships are those relationships that connect places to weapons.

Predicate types

- move_from
- move_to
- location_of
- sends_
- funded
- appears_
- criticize
- [[customer_specific]]

PlaceToDrug

The PlaceToDrug relationship represents a connection between a place and a legal or illicit drug.

Predicate types

- move_from
- acquires_
- sells_
- ceased
- funded
- move_to
- compensated_
- location_of
- uses
- sends_
- appears_
- made_
- apprehended
- [[customer_specific]]

PlaceToChemical

The PlaceToChemical relationship represents a connection between a place and a chemical.

Predicate types

- move_from
- move_to
- location_of
- appears_
- [[customer_specific]]

PlaceToConveyance

PlaceToConveyance relationships are those relationships that connect a place to a method of conveyance.

Predicate types

- move_from
- discover
- ceased
- move_to
- funded
- attack_
- made_
- complaints
- location_of
- sends_
- appears_

- [[customer_specific]]

PlaceToCrime

The PlaceToCrime relationship represents relationships between a specific place and a criminal offense.

Predicate types

- charged_with
- commits
- accused
- denied
- alleges
- funded
- prevented_
- authorized
- occurs
- participated_in
- involvement
- involvement
- location_of
- penalize_
- absolved_
- plotted_
- linked_to
- [[customer_specific]]

PlaceToImplement

The PlaceToImplement relationship represents a connection between a place and an implement.

Predicate types

- move_from
- move_to
- made_
- location_of
- sends_
- appears_
- [[customer_specific]]

PlaceToDisease

The PlaceToDisease relationship represents a connection between a place and a disease.

Predicate types

- travels_
- originated_
- location_of
- made_
- death
- affected_by
- isolate
- variant_of
- researched
- damaged
- expert_on
- describe
- accused
- battle
- targets
- treating
- [[customer_specific]]

PlaceToDNA

The PlaceToDNA relationship represents a connection between a place and DNA.

Predicate types

- belongs_to
- identified_
- originated_
- [[customer_specific]]

PlaceToGene

The PlaceToGene relationship represents a connection between a place and a gene.

Predicate types

- belongs_to
- identified_
- originated_
- [[customer_specific]]

PlaceToProduct

The PlaceToProduct relationship represents a connection between a place and a commercial product.

Predicate types

- move_from
- move_to

- lost
- damaged
- made_
- location_of
- received
- sends_
- appears_
- launches
- ceased
- [[customer_specific]]

PlaceToEvent

PlaceToEvent relationships represent those relationships that connect a place to an event.

Predicate types

- location_of
- initiated
- describe
- attended
- funded
- affected_by
- targets
- participated_in
- compensated_
- linked_to
- [[customer_specific]]

PlaceToHashtag

PlaceToHashtag relationships represent those relationships that connect a place to a hashtag.

Predicate types

- mentioned_in
- [[customer_specific]]

PlaceToPublication

PlaceToPublication relationships are those relationships that connect a place with a publication.

Predicate types

- location_of
- sends_
- published_in
- denied

- funded
- [[customer_specific]]

PlaceToEmail

The PlaceToEmail relationship represents a relationship between a place and an email address.

Predicate types

- location_of
- [[customer_specific]]

PlaceToScore

The PlaceToScore relationship represents a relationship between a place and a score.

Predicate types

- acquires_
- received
- has
- [[customer_specific]]

PlaceToSocial

The PlaceToSocial relationship represents a connection between a place and a social media identifier.

Predicate types

- [[customer_specific]]

PlaceToPhone

The PlaceToPhone relationship represents a connection between a place and a phone number.

Predicate types

- originated_
- location_of
- [[customer_specific]]

PlaceToURL

PlaceToURL relationships are those relationships that represent a connection between a place and a website or IP address.

Predicate types

- location_of
- [[customer_specific]]

PlaceToGeocoordinate

The PlaceToGeocoordinate relationship represents relationships between a place and a geocoordinate.

Predicate types

- location_of
- [[customer_specific]]

PlaceToMoney

PlaceToMoney relationships are those relationships that connect a place to a numeric amount of money.

Predicate types

- location_of
- ceased
- sends_
- funded
- [[customer_specific]]

PlaceToPercent

The PlaceToPercent relationship represents a relationship between a place and a percentage.

Predicate types

- location_of
- [[customer_specific]]

PlaceToMeasure

PlaceToMeasure relationships are those relationships that denote a connection between a place and a numeric measure.

Predicate types

- age_of
- [[customer_specific]]

PlaceToIDNUM

The PlaceToIDNUM relationship represents a connection between a place and an identification number.

Predicate types

- [[customer_specific]]

PlaceToCitation

The PlaceToCitation relationship represents a connection between a place and a legal citation number.

Predicate types

- location_of
- [[customer_specific]]

PlaceToProfession

The PlaceToProfession relationship represents a connection between a place and a profession.

Predicate types

- travels_
- location_of
- works_
- kidnapped_
- employs
- [[customer_specific]]

PlaceToNationality

The PlaceToNationality relationship represents a connection between a place and a nationality.

Predicate types

- travels_
- escaped_from
- citizen_of
- battle
- move_from
- region_served
- move_to
- works_with
- affected_by
- kidnapped_
- works_
- communicated_
- employs
- linked_to
- [[customer_specific]]

PlaceToMedical_Procedure

The PlaceToMedical_procedure relationship represents a connection between a place and a medical procedure.

Predicate types

- location_of
- [[customer_specific]]

PlaceToIdeology

The PlaceToIdeology relationship represents a connection between a place and an ideology.

Predicate types

- region_served
- govern_
- operates_in

- location_of
- [[customer_specific]]

PlaceToTimestamp

The PlaceToTimestamp relationship represents a connection between a place and a timestamp.

Predicate types

- founded_
- linked_to
- [[customer_specific]]

PlaceToTimespan

The PlaceToTimespan relationship represents a connection between a place and a timespan.

Predicate types

- from_
- [[customer_specific]]

PlaceToTicker_Symbol

The PlaceToTicker_Symbol relationship represents a connection between a place and a ticker symbol.

Predicate types

- operates_in
- location_of
- linked_to
- [[customer_specific]]

PlaceToAlert_Type

The PlaceToAlert_Type relationship represents a connection between a place and a travel alert or warning issued by the State Department.

Predicate types

- [[customer_specific]]

PlaceToImperative

The PlaceToImperative relationship represents a connection between a place and travel instructions from the State Department.

Predicate types

- [[customer_specific]]

PlaceToProgram

The PlaceToProgram relationship represents a connection between a place and a program, project, or plan.

Predicate types

- location_of
- operates_in
- denied
- [[customer_specific]]

PlaceToPunitive_Measure

The PlaceToPunitive_Measure relationship represents a connection between a place and a punitive measure.

Predicate types

- affected_by
- [[customer_specific]]

PlaceToPolitical_Affiliation

The PlaceToPolitical_Affiliation relationship represents a connection between a place and a political party.

Predicate types

- linked_to
- location_of
- [[customer_specific]]

PlaceToTransit

The PlaceToTransit relationship represents a connection between a place and a transit entity.

Predicate types

- location_of
- services
- [[customer_specific]]

PhoneToGeocoordinate

The PhoneToGeocoordinate relationship represents a connection between a phone number and a geocoordinate.

Predicate types

- [[customer_specific]]

URLToGeocoordinate

The URLToGeocoordinate relationship represents a connection between a URL and a geocoordinate.

Predicate types

- linked_to
- [[customer_specific]]

WeaponToMoney

WeaponToMoney relationships are those relationships that connect a weapon to a numeric amount of money.

Predicate types

- gain_
- loss
- acquires_
- penalize_
- price_
- value_of
- sells_
- [[customer_specific]]

WeaponToPercent

The WeaponToPercent relationship represents a relationship between a weapon and a percentage.

Predicate types

- loss
- sells_
- gain_
- [[customer_specific]]

WeaponToMeasure

WeaponToMeasure relationships are those relationships that denote a connection between a weapon and a numeric measure.

Predicate types

- weight_of
- speed
- [[customer_specific]]

WeaponToConveyance

WeaponToConveyance relationships are those relationships that denote a connection between a weapon and a conveyance.

Predicate types

- appears_
- sells_
- has
- linked_to
- [[customer_specific]]

WeaponToEvent

WeaponToEvent relationships are those relationships that denote a connection between a weapon and an event.

Predicate types

- caused
- sends_
- appears_
- affected_by
- [[customer_specific]]

WeaponToIdeology

WeaponToIdeology relationships are those relationships that denote a connection between a weapon and an ideology.

Predicate types

- died_from
- uses
- supplied
- dispose
- [[customer_specific]]

WeaponToNationality

WeaponToNationality relationships are those relationships that denote a connection between a weapon and a nationality.

Predicate types

- supplied
- dispose
- died_from
- uses
- [[customer_specific]]

WeaponToPunitive_Measure

WeaponToPunitive_Measure relationships are those relationships that denote a connection between a weapon and a punitive measure.

Predicate types

- uses
- [[customer_specific]]

WeaponToGeocoordinate

The WeaponToGeocoordinate relationship represents a relationship between a weapon and a geospatial coordinate.

Predicate types

- discover
- took
- sells_
- made_
- sends_
- received
- appears_
- lost
- damaged
- uses
- removed_from
- [[customer_specific]]

WeaponToCitation

The WeaponToCitation relationship represents a connection between a weapon and a legal citation number.

Predicate types

- [[customer_specific]]

WeaponToHashtag

The WeaponToHashtag relationship represents those relationships that connect a weapon to a social media hashtag.

Predicate types

- [[customer_specific]]

WeaponToTimestamp

The WeaponToTimestamp relationship represents a connection between a weapon and a date & time expression.

Predicate types

- [[customer_specific]]

WeaponToCrime

The WeaponToCrime relationship represents a connection between a weapon and a crime.

Predicate types

- linked_to
- uses
- [[customer_specific]]

WeaponToProfession

The WeaponToProfession relationship represents a connection between a weapon and a profession.

Predicate types

- discover
- belongs_to
- acquires_
- sends_
- invested_in
- made_
- researched
- compensated_
- access_to
- studies
- uses
- has
- linked_to
- [[customer_specific]]

WeaponToProgram

The WeaponToProgram relationship represents those relationships that connect a weapon to a program, project, or plan.

Predicate types

- acquires_
- compensated_
- invested_in
- affected_by
- launches
- [[customer_specific]]

WeaponToIDNUM

The WeaponToIDNUM relationship represents a connection between a weapon and an identification number.

Predicate types

- belongs_to
- identified_by
- has
- linked_to
- [[customer_specific]]

WeaponToScore

The WeaponToScore relationship represents those relationships that connect a weapon to a score.

Predicate types

- acquires_
- received
- has
- [[customer_specific]]

WeaponToURL

The WeaponToURL relationship represents those relationships that connect a weapon to a URL.

Predicate types

- sells_
- acquires
- [[customer_specific]]

DrugToDrug

The DrugToDrug relationship represents a connection between a legal or illicit drug and another drug.

Predicate types

- variant_of
- linked_to
- [[customer_specific]]

DrugToProduct

The DrugToProduct relationship represents a connection between a legal or illicit drug and a commercial product.

Predicate types

- linked_to
- [[customer_specific]]

DrugToMedical_Procedure

The DrugToMedical_Procedure relationship represents a connection between a legal or illicit drug and a medical procedure.

Predicate types

- contribute
- treating
- [[customer_specific]]

DrugToDisease

The DrugToDisease relationship represents a connection between a legal or illicit drug and a disease.

Predicate types

- battle
- assists
- caused
- improve
- alleges
- affected_by
- damaged
- treating
- attack_
- targets
- uses
- [[customer_specific]]

DrugToCrime

The DrugToCrime relationship represents a connection between a legal or illicit drug and a crime.

Predicate types

- uses
- alleges
- assists
- linked_to
- [[customer_specific]]

DrugToPunitive_Measure

The DrugToPunitive_Measure relationship represents a connection between a legal or illicit drug and a punitive measure.

Predicate types

- uses
- [[customer_specific]]

DrugToGene

The DrugToGene relationship represents a connection between a legal or illicit drug and a gene.

Predicate types

- improve
- [[customer_specific]]

DrugToConveyance

DrugToConveyance relationships are those relationships that connect a legal or illicit drug to a method of conveyance.

Predicate types

- dispose
- discover
- linked_to
- [[customer_specific]]

DrugToEvent

DrugToEvent relationships represent those relationships that connect a legal or illicit drug to an event.

Predicate types

- sends_
- treating
- acquires_
- [[customer_specific]]

DrugToPublication

DrugToPublication relationships are those relationships that connect a legal or illicit drug with a publication.

Predicate types

- [[customer_specific]]

DrugToMoney

DrugToMoney relationships are those relationships that connect a legal or illicit drug to a numeric amount of money.

Predicate types

- gain_
- loss
- acquires_
- penalize_
- price_
- value_of
- sells_
- [[customer_specific]]

DrugToPercent

The DrugToPercent relationship represents a relationship between a legal or illicit drug and a percentage.

Predicate types

- gain_
- loss
- sells_
- decrease_to

- weight_of
- [[customer_specific]]

DrugToMeasure

DrugToMeasure relationships are those relationships that denote a connection between a legal or illicit drug and a numeric measure.

Predicate types

- amount
- weight_of
- [[customer_specific]]

DrugToCitation

The DrugToCitation relationship represents a connection between a legal or illicit drug and a legal citation number.

Predicate types

- [[customer_specific]]

DrugToHashtag

The DrugToHashtag relationship represents those relationships that connect a legal or illicit drug to a social media hashtag.

Predicate types

- [[customer_specific]]

DrugToTimestamp

The DrugToTimestamp relationship represents a connection between a legal or illicit drug and a date & time expression.

Predicate types

- [[customer_specific]]

DrugToProgram

The DrugToProgram relationship represents a connection between a legal or illicit drug and a program, project, or plan.

Predicate types

- compensated_
- [[customer_specific]]

DrugToIDNUM

The DrugToIDNUM relationship represents a connection between a legal or illicit drug and an identification number.

Predicate types

- linked_to

- [[customer_specific]]

DrugToURL

The DrugToURL relationship represents a connection between a legal or illicit drug and a URL.

Predicate types

- sells
- [[customer_specific]]

ChemicalToConveyance

ChemicalToConveyance relationships are those relationships that connect a chemical to a method of conveyance.

Predicate types

- [[customer_specific]]

ChemicalToProduct

The ChemicalToProduct relationship represents a connection between chemical and a commercial product.

Predicate types

- linked_to
- [[customer_specific]]

ChemicalToEvent

ChemicalToEvent relationships represent those relationships that connect a chemical to an event.

Predicate types

- [[customer_specific]]

ChemicalToPublication

ChemicalToPublication relationships are those relationships that connect a chemical with a publication.

Predicate types

- [[customer_specific]]

ChemicalToMoney

ChemicalToMoney relationships are those relationships that connect a chemical to a numeric amount of money.

Predicate types

- price_
- value_of
- sells_
- [[customer_specific]]

ChemicalToPercent

The ChemicalToPercent relationship represents a relationship between a chemical and a percentage.

Predicate types

- [[customer_specific]]

ChemicalToMeasure

ChemicalToMeasure relationships are those relationships that denote a connection between a chemical and a numeric measure.

Predicate types

- amount
- weight_of
- [[customer_specific]]

ChemicalToURL

ChemicalToURL relationships are those relationships that denote a connection between a chemical and a URL.

Predicate types

- sells_
- [[customer_specific]]

ChemicalToIDNUM

The ChemicalToIDNUM relationship represents a connection between a chemical and an identification number.

Predicate types

- [[customer_specific]]

ChemicalToCitation

The ChemicalToCitation relationship represents a connection between a chemical and a legal citation number.

Predicate types

- [[customer_specific]]

ChemicalToHashtag

The ChemicalToHashtag relationship represents those relationships that connect a chemical to a social media hashtag.

Predicate types

- [[customer_specific]]

ChemicalToTimestamp

The ChemicalToTimestamp relationship represents a connection between a chemical and a date & time expression.

Predicate types

- [[customer_specific]]

ConveyanceToEvent

ConveyanceToEvent relationships represent those relationships that connect a method of conveyance to an event.

Predicate types

- [[customer_specific]]

ConveyanceToPublication

ConveyanceToPublication relationships are those relationships that connect a method of conveyance with a publication.

Predicate types

- consider
- [[customer_specific]]

ConveyanceToMoney

ConveyanceToMoney relationships are those relationships that connect a method of conveyance to a numeric amount of money.

Predicate types

- gain_
- loss
- acquires_
- penalize_
- price_
- value_of
- sells_
- [[customer_specific]]

ConveyanceToPercent

The ConveyanceToPercent relationship represents a relationship between a method of conveyance and a percentage.

Predicate types

- loss
- sells_
- gain_
- [[customer_specific]]

ConveyanceToMeasure

ConveyanceToMeasure relationships are those relationships that denote a connection between a method of conveyance and a numeric measure.

Predicate types

- [[customer_specific]]

ConveyanceToIDNUM

The ConveyanceToIDNUM relationship represents a connection between a method of conveyance and an identification number.

Predicate types

- belongs_to
- identified_by
- has
- linked_to
- [[customer_specific]]

ConveyanceToConveyance

The ConveyanceToConveyance relationship represents a connection between a method of conveyance and another conveyance entity.

Predicate types

- dispatched
- [[customer_specific]]

ConveyanceToCrime

The ConveyanceToCrime relationship represents a connection between a method of conveyance and a crime entity.

Predicate types

- suspected
- died_from
- uses
- [[customer_specific]]

ConveyanceToCitation

The ConveyanceToCitation relationship represents a connection between a method of conveyance and a legal citation number.

Predicate types

- [[customer_specific]]

ConveyanceToHashtag

The ConveyanceToHashtag relationship represents those relationships that connect a method of conveyance to a social media hashtag.

Predicate types

- [[customer_specific]]

ConveyanceToTimestamp

The ConveyanceToTimestamp relationship represents a connection between a method of conveyance and a date & time expression.

Predicate types

- [[customer_specific]]

ConveyanceToTransit

The ConveyanceToTransit relationship represents a connection between a method of conveyance and a transit entity.

Predicate types

- owns
- location_of
- [[customer_specific]]

ConveyanceToProfession

The ConveyanceToProfession relationship represents a connection between a method of conveyance and a profession.

Predicate types

- linked_to
- [[customer_specific]]

ConveyanceToGeocoordinate

The ConveyanceToGeocoordinate relationship represents a connection between a method of conveyance and a geocoordinate.

Predicate types

- discover
- move_from
- attack_
- move_to
- lost
- move_from
- damaged
- made_
- location_of

- sends_
- attack_
- [[customer_specific]]

ConveyanceToNationality

The ConveyanceToNationality relationship represents a connection between a method of conveyance and a nationality.

Predicate types

- acquires_
- made_
- [[customer_specific]]

ConveyanceToScore

The ConveyanceToScore relationship represents a connection between a method of conveyance and a score.

Predicate types

- acquires_
- received
- has
- [[customer_specific]]

ConveyanceToURL

The ConveyanceToURL relationship represents a connection between a method of conveyance and a URL.

Predicate types

- sells_
- acquires_
- [[customer_specific]]

CrimeToTimestamp

The CrimeToTimestamp relationship represents a connection between a crime and a date & time expression.

Predicate types

- date_of
- occurs
- linked_to
- [[customer_specific]]

CrimeToEvent

The CrimeToEvent relationship represents a connection between a crime and an event.

Predicate types

- affected_by
- date_of
- occurs
- location_of
- linked_to
- [[customer_specific]]

CrimeToProfession

The CrimeToProfession relationship represents a connection between a crime and a profession.

Predicate types

- supports_
- compensated_
- uses
- participated_in
- affected_by
- apprehended
- witnessed
- authorized
- conviction_
- inquire_
- mandate
- funded
- accused
- threaten
- attack_
- assists
- charged_with
- commits
- denied
- involvement
- suspected
- alleges
- absolved_
- linked_to
- [[customer_specific]]

CrimeToCrime

The CrimeToCrime relationship represents a connection between one crime and another.

Predicate types

- affected_by
- caused
- linked_to
- [[customer_specific]]

CrimeToPunitive_Measure

The CrimeToPunitive_Measure relationship represents a connection between a crime and a punitive measure.

Predicate types

- enforce
- conviction_
- linked_to
- [[customer_specific]]

CrimeToPercent

The CrimeToPercent relationship represents a connection between a crime and a percentage.

Predicate types

- gain_
- maintains
- decrease_to
- affected_by
- [[customer_specific]]

CrimeToMoney

The CrimeToMoney relationship represents a connection between a crime and money.

Predicate types

- acquires_
- commits
- funded
- penalize_
- compensated_
- received
- made_
- laundered
- lost
- monetary_earning
- deceive
- linked_to

- [[customer_specific]]

CrimeToIdeology

The CrimeToIdeology relationship represents a connection between a crime and an ideology.

Predicate types

- compensated_
- commits
- died_from
- affected_by
- laundered
- involvement
- suspected
- participated_in
- charged_with
- funded
- authorized
- threaten
- plotted_
- linked_to
- [[customer_specific]]

CrimeToNationality

The CrimeToNationality relationship represents a connection between a crime and a nationality.

Predicate types

- govern_
- compensated_
- died_from
- funded
- commits
- has
- charged_with
- affected_by
- laundered
- denied
- involvement
- suspected
- alleges
- conviction_
- participated_in

- plotted_
- authorized
- absolved_
- threaten
- [[customer_specific]]

CrimeToIDNUM

The CrimeToIDNUM relationship represents a connection between a crime and an identification number.

Predicate types

- belongs_to
- identified_by
- has
- linked_to
- [[customer_specific]]

CrimeToSocial

The CrimeToSocial relationship represents a connection between a crime and a social media identifier.

Predicate types

- communicated_
- acknowledge
- alleges
- accused
- mentioned_in
- caused
- referenced
- linked_to
- [[customer_specific]]

CrimeToImplement

The CrimeToImplement relationship represents a connection between a crime and an implement.

Predicate types

- uses
- linked_to
- [[customer_specific]]

IDNUMToTimestamp

The IDNUMToTimestamp relationship represents relationships between an identification number and a timestamp.

Predicate types

- identified_by
- issued_
- expiration_date
- linked_to
- [[customer_specific]]

IDNUMToImplement

The IDNUMToImplement relationship represents relationships between an identification number and an implement.

Predicate types

- identified_by
- has
- [[customer_specific]]

IDNUMToProduct

The IDNUMToProduct relationship represents relationships between an identification number and a product.

Predicate types

- has
- identified_by
- belongs_to
- [[customer_specific]]

MeasureToPercent

The MeasureToPercent relationship represents relationships between a measure and a percentage.

Predicate types

- has
- [[customer_specific]]

MeasureToTimestamp

The MeasureToTimestamp relationship represents relationships between a measure and a timestamp.

Predicate types

- date_of
- has
- [[customer_specific]]

DiseaseToGene

The DiseaseToGene relationship denotes relationships between diseases and gene entities.

Predicate types

- caused

- damaged
- targets
- attack_
- [[customer_specific]]

DiseaseToDNA

The DiseaseToDNA relationship denotes relationships between diseases and DNA.

Predicate types

- caused
- like
- damaged
- targets
- attack_
- [[customer_specific]]

DiseaseToDisease

The DiseaseToDisease relationship denotes relationships between one disease and another.

Predicate types

- caused
- variant_of
- like
- linked_to
- originated_
- [[customer_specific]]

DiseaseToProduct

The DiseaseToProduct relationship denotes relationships between diseases and commercial products.

Predicate types

- linked_to
- [[customer_specific]]

DiseaseToImplement

The DiseaseToImplement relationship denotes relationships between diseases and an implement.

Predicate types

- perform
- uses
- has
- affected_by
- linked_to

- isolate
- [[customer_specific]]

DiseaseToProfession

The DiseaseToProfession relationship denotes relationships between diseases and a profession.

Predicate types

- researched
- works_with
- studies
- has
- linked_to
- expert_on
- gave_
- afflicted_with
- describe
- acknowledge
- affected_by
- communicated_
- died_from
- criticize
- suspected
- isolate
- originated_
- variant_of
- treating
- [[customer_specific]]

DiseaseToEvent

DiseaseToEvent relationships represent those relationships that connect a disease to an event.

Predicate types

- like
- formed
- caused
- gave_
- originated_
- affected_by
- formed
- linked_to
- [[customer_specific]]

DiseaseToPublication

DiseaseToPublication relationships are those relationships that connect a disease with a publication.

Predicate types

- communicated_
- researched
- studies
- subject_of
- alleges
- criticize
- denied
- referenced
- appears_
- acknowledge
- [[customer_specific]]

DiseaseToGeocoordinate

The DiseaseToGeocoordinate relationship represents relationships between a disease and a geocoordinate.

Predicate types

- travels_
- formed
- originated_
- location_of
- [[customer_specific]]

DiseaseToMoney

DiseaseToMoney relationships are those relationships that connect a disease to a numeric amount of money.

Predicate types

- price_
- [[customer_specific]]

DiseaseToMedical_Procedure

DiseaseToMedical_Procedure relationships are those relationships that connect a disease to a medical procedure.

Predicate types

- create
- uses
- has

- death
- affected_by
- treating
- linked_to
- [[customer_specific]]

DiseaseToPercent

The DiseaseToPercent relationship represents a relationship between a disease and a percentage.

Predicate types

- has
- affected_by
- linked_to
- [[customer_specific]]

DiseaseToMeasure

The DiseaseToMeasure relationship represents a relationship between a disease and a measure.

Predicate types

- weight_of
- [[customer_specific]]

DiseaseToCitation

The DiseaseToCitation relationship represents a connection between a disease and a legal citation number.

Predicate types

- [[customer_specific]]

DiseaseToHashtag

The DiseaseToHashtag relationship represents those relationships that connect a disease to a social media hashtag.

Predicate types

- [[customer_specific]]

DiseaseToTimestamp

The DiseaseToTimestamp relationship represents a connection between a disease and a date & time expression.

Predicate types

- discover
- occurs
- [[customer_specific]]

ProductToEvent

ProductToEvent relationships represent those relationships that connect a commercial product to an event.

Predicate types

- unveil
- launches
- ceased
- [[customer_specific]]

ProductToGeocoordinate

ProductToGeocoordinate relationships are those relationships that connect a commercial product with a geocoordinate.

Predicate types

- discover
- move_from
- move_to
- lost
- damaged
- made_
- location_of
- sends_
- received
- [[customer_specific]]

ProductToPublication

ProductToPublication relationships are those relationships that connect a commercial product with a publication.

Predicate types

- select
- mentioned_in
- describe
- consider
- published_in
- [[customer_specific]]

ProductToPhone

ProductToPhone relationships are those relationships that represent a connection between a product and a phone number.

Predicate types

- [[customer_specific]]

ProductToConveyance

ProductToConveyance relationships are those relationships that represent a connection between a product and a conveyance.

Predicate types

- [[customer_specific]]

ProductToURL

ProductToURL relationships are those relationships that represent a connection between a product and a website or IP address.

Predicate types

- sells_
- linked_to
- [[customer_specific]]

ProductToMoney

ProductToMoney relationships are those relationships that connect a commercial product to a numeric amount of money.

Predicate types

- gain_
- loss
- acquires_
- monetary_earning
- penalize_
- price_
- made_
- value_of
- sells_
- [[customer_specific]]

ProductToPercent

The ProductToPercent relationship represents a relationship between a commercial product and a percentage.

Predicate types

- gain_
- loss
- monetary_earning
- decrease_to
- [[customer_specific]]

ProductToMeasure

The ProductToMeasure relationship represents a relationship between a commercial product and a numeric measure.

Predicate types

- age_of
- weight_of
- sells_
- height_of
- price_
- [[customer_specific]]

ProductToCitation

The ProductToCitation relationship represents a connection between a commercial product and a legal citation number.

Predicate types

- [[customer_specific]]

ProductToHashtag

The ProductToHashtag relationship represents those relationships that connect a commercial product to a social media hashtag.

Predicate types

- mentioned_in
- referenced
- [[customer_specific]]

ProductToTimestamp

The ProductToTimestamp relationship represents a connection between a commercial product and a date & time expression.

Predicate types

- ceased
- launches
- [[customer_specific]]

ProductToProduct

The ProductToProduct relationship represents a connection between a commercial product and another product.

Predicate types

- linked_to
- [[customer_specific]]

ProductToProgram

The ProductToProgram relationship represents a connection between a commercial product and a program, project, or plan.

Predicate types

- acquires_
- made_
- [[customer_specific]]

ProductToProfession

The ProductToProfession relationship represents a connection between a commercial product and a profession.

Predicate types

- acquires_
- made_
- contribute
- describe
- [[customer_specific]]

ProductToAward

The ProductToAward relationship represents a connection between a commercial product and an award.

Predicate types

- acquires_
- received
- has
- win
- [[customer_specific]]

ProductToScore

The ProductToScore relationship represents a connection between a commercial product and a score.

Predicate types

- acquires_
- received
- has
- [[customer_specific]]

ProductToIdeology

The ProductToIdeology relationship represents a connection between a commercial product and an ideology.

Predicate types

- belongs_to
- acquires_
- identified_by
- compensated_
- access_to
- [[customer_specific]]

EventToPublication

EventToPublication relationships are those relationships that connect an event with a publication.

Predicate types

- visited_
- contact
- mentioned_in
- published_in
- [[customer_specific]]

EventToEvent

EventToEvent relationships are those relationships that connect one event with another.

Predicate types

- linked_to
- contact
- [[customer_specific]]

EventToNationality

EventToNationality relationships are those relationships that connect an event with a nationality.

Predicate types

- works_with
- subject_of
- compensated_
- supports_
- employs
- access_to
- participated_in
- attended
- works_
- monetary_earning
- initiated
- involvement
- travels_

- funded
- discredit
- dissent
- contribute
- visited_
- died_from
- witnessed
- sponsored
- attack_
- criticize
- initiated
- linked_to
- [[customer_specific]]

EventToEmail

The EventToEmail relationship represents the relationship between an event and an email address.

Predicate types

- belongs_to
- emailed
- contact
- mentioned_in
- linked_to
- [[customer_specific]]

EventToSocial

EventToSocial relationships are those relationships that connect an event to a social media identifier.

Predicate types

- belongs_to
- emailed
- contact
- mentioned_in
- linked_to
- [[customer_specific]]

EventToPhone

EventToPhone relationships are those relationships that connect an event to a phone number.

Predicate types

- [[customer_specific]]

EventToURL

EventToURL relationships are those relationships that represent a connection between an event and a website or IP address.

Predicate types

- [[customer_specific]]

EventToGeocoordinate

The EventToGeocoordinate relationship represents relationships between an event and a geocoordinate.

Predicate types

- [[customer_specific]]

EventToMoney

EventToMoney relationships are those relationships that connect an event to a numeric amount of money.

Predicate types

- loss
- amount
- acquires_
- penalize_
- made_
- price_
- sends_
- received
- [[customer_specific]]

EventToPercent

The EventToPercent relationship represents a relationship between an event and a percentage.

Predicate types

- [[customer_specific]]

EventToMeasure

The EventToMeasure relationship represents a relationship between an event and a numeric measure.

Predicate types

- [[customer_specific]]

EventToCitation

The EventToCitation relationship represents a connection between an event and a legal citation number.

Predicate types

- [[customer_specific]]

EventToHashtag

The EventToHashtag relationship represents those relationships that connect an event to a social media hashtag.

Predicate types

- referenced
- mentioned_in
- [[customer_specific]]

EventToTimestamp

The EventToTimestamp relationship represents a connection between an event and a date & time expression.

Predicate types

- date_of
- occurs
- targets
- linked_to
- [[customer_specific]]

EventToTimespan

The EventToTimespan relationship represents a connection between an event and a duration of time.

Predicate types

- date_of
- occurs
- targets
- linked_to
- [[customer_specific]]

EventToIdeology

The EventToIdeology relationship represents a connection between an event and an ideology.

Predicate types

- compensated_
- host
- invested_in
- sponsored
- participated_in
- formed
- launches
- works_

- works_with
- supports_
- initiated
- involvement
- funded
- discredit
- dissent
- contribute
- attack_
- criticize
- initiated
- linked_to
- [[customer_specific]]

EventToProgram

The EventToProgram relationship represents a connection between an event and a program, project, or plan.

Predicate types

- compensated_
- contact
- host
- depart
- launches
- [[customer_specific]]

EventToPunitive_Measure

The EventToPunitive_Measure relationship represents a connection between an event and a punitive measure.

Predicate types

- affected_by
- [[customer_specific]]

EventToPolitical_Affiliation

The EventToPolitical_Affiliation relationship represents a connection between an event and a political party.

Predicate types

- compensated_
- contact
- host
- sponsored

- participated_in
- depart
- [[customer_specific]]

EventToTransit

The EventToTransit relationship represents a connection between an event and a transit entity.

Predicate types

- location_of
- sends_
- [[customer_specific]]

EventToAward

The EventToAward relationship represents a connection between an event and an award.

Predicate types

- acquires_
- received
- has
- win
- [[customer_specific]]

EventToProfession

The EventToProfession relationship represents a connection between an event and a profession.

Predicate types

- visited_
- implements
- works_
- speaks_at
- contact
- attended
- contribute
- charged_with
- depart
- communicated_
- linked_to
- [[customer_specific]]

EmailToEmail

The EmailToEmail relationship represents the relationship between one email address and another.

Predicate types

- originated_
- sends_
- opened
- received
- location_of
- communicated_
- [[customer_specific]]

EmailToIDNUM

The EmailToIDNUM relationship represents the relationship between an email address and an identification number.

Predicate types

- belongs_to
- identified_by
- has
- [[customer_specific]]

EmailToPhone

The EmailToPhone relationship represents the relationship between an email address and a phone number.

Predicate types

- mentioned_in
- [[customer_specific]]

EmailToTimestamp

The EmailToTimestamp relationship represents the relationship between an email address and a timestamp.

Predicate types

- belongs_to
- originated_
- emailed
- opened
- received
- location_of
- has
- date_of
- [[customer_specific]]

EmailToGeocoordinate

The EmailToGeocoordinate relationship represents the relationship between an email address and a geocoordinate.

Predicate types

- originated_
- mentioned_in
- location_of
- [[customer_specific]]

EmailToMoney

The EmailToMoney relationship represents the relationship between an email address and money.

Predicate types

- mentioned_in
- [[customer_specific]]

EmailToDrug

The EmailToDrug relationship represents the relationship between an email address and a drug.

Predicate types

- mentioned_in
- emailed
- [[customer_specific]]

EmailToDisease

The EmailToDisease relationship represents the relationship between an email address and a disease.

Predicate types

- mentioned_in
- [[customer_specific]]

EmailToCrime

The EmailToCrime relationship represents the relationship between an email address and a crime.

Predicate types

- emailed
- mentioned_in
- linked_to
- [[customer_specific]]

EmailToWeapon

The EmailToWeapon relationship represents the relationship between an email address and a weapon.

Predicate types

- mentioned_in
- emailed
- [[customer_specific]]

EmailToProduct

The EmailToProduct relationship represents the relationship between an email address and a product.

Predicate types

- emailed
- linked_to
- mentioned_in
- [[customer_specific]]

EmailToImplement

The EmailToImplement relationship represents the relationship between an email address and an implement.

Predicate types

- mentioned_in
- emailed
- linked_to
- [[customer_specific]]

PublicationToEmail

The PublicationToEmail relationship represents the relationship between a publication and an email address.

Predicate types

- [[customer_specific]]

PublicationToSocial

The PublicationToSocial relationship represents a connection between a publication and a social media identifier.

Predicate types

- mentioned_in
- communicated_
- [[customer_specific]]

PublicationToPublication

The PublicationToPublication relationship represents a connection between one publication and another.

Predicate types

- mentioned_in

- published_in
- submitted
- linked_to
- [[customer_specific]]

PublicationToProfession

The PublicationToProfession relationship represents a connection between a publication and a profession.

Predicate types

- inform
- contact
- mentioned_in
- describe
- consider
- communicated_
- submitted
- [[customer_specific]]

PublicationToPhone

PublicationToPhone relationships are those relationships that connect a publication to a phone number.

Predicate types

- [[customer_specific]]

PublicationToURL

PublicationToURL relationships are those relationships that represent a connection between a publication and a website or IP address.

Predicate types

- maintains
- belongs_to
- inform
- owns
- [[customer_specific]]

PublicationToMoney

PublicationToMoney relationships are those relationships that connect a publication to a numeric amount of money.

Predicate types

- loss
- acquires_
- price_

- made_
- value_of
- sells_
- received
- [[customer_specific]]

PublicationToPercent

The PublicationToPercent relationship represents a relationship between a publication and a percentage.

Predicate types

- announce
- [[customer_specific]]

PublicationToMeasure

The PublicationToMeasure relationship represents a relationship between a publication and a numeric measure.

Predicate types

- age_of
- price_
- [[customer_specific]]

PublicationToCitation

The PublicationToCitation relationship represents a connection between a publication and a legal citation number.

Predicate types

- referenced
- has
- [[customer_specific]]

PublicationToMedical_Procedure

The PublicationToMedical_Procedure relationship represents a connection between a publication and a medical procedure.

Predicate types

- mentioned_in
- consider
- [[customer_specific]]

PublicationToHashtag

The PublicationToHashtag relationship represents those relationships that connect a publication to a social media hashtag.

Predicate types

- [[customer_specific]]

PublicationToTimestamp

The PublicationToTimestamp relationship represents a connection between a publication and a date & time expression.

Predicate types

- issued_
- published_in
- date_of
- [[customer_specific]]

PublicationToProgram

The PublicationToProgram relationship represents a connection between a publication and a program, project, or plan.

Predicate types

- inform
- referenced
- mentioned_in
- describe
- published_in
- [[customer_specific]]

PublicationToPolitical_Affiliation

The PublicationToPolitical_Affiliation relationship represents a connection between a publication and a political party.

Predicate types

- inform
- subject_of
- mentioned_in
- published_in
- [[customer_specific]]

PublicationToGene

The PublicationToGene relationship represents a connection between a publication and a gene entity.

Predicate types

- discover
- researched
- identified_by
- conclude
- studies

- linked_to
- [[customer_specific]]

PublicationToAward

The PublicationToAward relationship represents a connection between a publication and an award.

Predicate types

- acquires_
- received
- has
- win
- [[customer_specific]]

PublicationToIdeology

The PublicationToIdeology relationship represents a connection between a publication and an ideology.

Predicate types

- discover
- author_of
- studies
- describe
- communicated_
- linked_to
- [[customer_specific]]

RatingToPercent

The RatingToPercent relationship represents a relationship between a financial rating and a percentage.

Predicate types

- loss
- sells_
- gain_
- [[customer_specific]]

Financial_IndexToPercent

The Financial_IndexToPercent relationship represents a relationship between a financial index or market and a percentage.

Predicate types

- gain_
- loss
- sells_
- decrease_to

- compensated_
- announce
- [[customer_specific]]

Financial_IndexToTicker_Symbol

The Financial_IndexToTicker_Symbol relationship represents a relationship between a financial index or market and a ticker symbol.

Predicate types

- gain_
- loss
- decrease_to
- has
- [[customer_specific]]

Ticker_SymbolToPercent

The Ticker_SymbolToPercent relationship represents a relationship between a ticker symbol and a percentage.

Predicate types

- loss
- sells_
- gain_
- [[customer_specific]]

ProfessionToPunitive_Measure

The ProfessionToPunitive_Measure relationship represents a relationship between a profession and a punitive measure.

Predicate types

- takes_action
- implements
- [[customer_specific]]

ProfessionToProfession

The ProfessionToProfession relationship represents a relationship between one profession and another.

Predicate types

- works_with
- inform
- manages
- convert
- announce
- acquires_

- identified_by
- trusts
- negotiated_with
- advise
- conviction_
- contact
- instructs
- has
- consider
- works_
- removed_from
- linked_to
- [[customer_specific]]

ProfessionToMoney

The ProfessionToMoney relationship represents a relationship between a profession and money.

Predicate types

- penalize_
- made_
- sends_
- received
- monetary_earning
- laundered
- gain_
- loss
- acquires_
- lost
- value_of
- compensated_
- access_to
- invested_in
- has
- [[customer_specific]]

ProfessionToEmail

The ProfessionToEmail relationship represents a relationship between a profession and an email address.

Predicate types

- contact

- inform
- [[customer_specific]]

ProfessionToSocial

The ProfessionToSocial relationship represents a relationship between a profession and a social media identifier.

Predicate types

- contact
- inform
- [[customer_specific]]

ProfessionToPhone

The ProfessionToPhone relationship represents a relationship between a profession and a phone number.

Predicate types

- [[customer_specific]]

ProfessionToURL

The ProfessionToURL relationship represents a relationship between a profession and a URL.

Predicate types

- contact
- inform
- [[customer_specific]]

ProfessionToPercent

The ProfessionToPercent relationship represents a relationship between a profession and a percentage.

Predicate types

- [[customer_specific]]

ProfessionToMeasure

The ProfessionToMeasure relationship represents a relationship between a profession and a measure.

Predicate types

- [[customer_specific]]

ProfessionToCitation

The ProfessionToCitation relationship represents a relationship between a profession and a citation.

Predicate types

- [[customer_specific]]

ProfessionToHashtag

The ProfessionToHashtag relationship represents a relationship between a profession and a hashtag.

Predicate types

- [[customer_specific]]

ProfessionToTimestamp

The ProfessionToTimestamp relationship represents a relationship between a profession and a timestamp.

Predicate types

- [[customer_specific]]

ProfessionToAddress

The ProfessionToAddress relationship represents a relationship between a profession and an address.

Predicate types

- [[customer_specific]]

ProfessionToPolitical_Affiliation

The ProfessionToPolitical_Affiliation relationship represents a relationship between a profession and a political party.

Predicate types

- belongs_to
- inform
- advise
- contact
- instructs
- works_
- depart
- linked_to
- [[customer_specific]]

ProfessionToMedical_Procedure

The ProfessionToMedical_Procedure relationship represents a relationship between a profession and a medical procedure.

Predicate types

- discover
- works_with
- unveil
- perform
- contribute

- received
- researched
- instructs
- create
- studies
- uses
- has
- consider
- undergo
- died_from
- linked_to
- [[customer_specific]]

ProfessionToIdeology

The ProfessionToIdeology relationship represents a relationship between a profession and an ideology.

Predicate types

- researched
- belongs_to
- instructs
- works_
- depart
- creed
- linked_to
- [[customer_specific]]

ProfessionToProgram

The ProfessionToProgram relationship represents a relationship between a profession and a program.

Predicate types

- belongs_to
- communicated_
- advise
- manages
- instructs
- has
- compensated_
- works_
- depart
- endorse
- linked_to

- [[customer_specific]]

ProfessionToNationality

The ProfessionToNationality relationship represents a relationship between a profession and a nationality.

Predicate types

- works_with
- belongs_to
- united_
- researched
- identified_by
- compensated_
- advise
- studies
- has
- works_
- formed
- communicated_
- monetary_earning
- [[customer_specific]]

NationalityToIdeology

The NationalityToIdeology relationship represents a relationship between a nationality and an ideology.

Predicate types

- belongs_to
- follows_
- compensated_
- advise
- ethnic_group
- formed
- creed
- citizen_of
- abuse
- linked_to
- [[customer_specific]]

NationalityToGene

The NationalityToGene relationship represents a relationship between a nationality and a gene.

Predicate types

- belongs_to
- identified_
- identified_by
- ethnic_group
- has
- afflicted_with
- affected_by
- died_from
- linked_to
- [[customer_specific]]

NationalityToDNA

The NationalityToDNA relationship represents a relationship between a nationality and DNA.

Predicate types

- belongs_to
- identified_
- identified_by
- ethnic_group
- has
- afflicted_with
- affected_by
- died_from
- linked_to
- [[customer_specific]]

ProgramToEmail

The ProgramToEmail relationship represents a relationship between a program and an email address.

Predicate types

- emailed
- author_of
- mentioned_in
- linked_to
- [[customer_specific]]

ProgramToSocial

The ProgramToSocial relationship represents a relationship between a program and a social media identifier.

Predicate types

- mentioned_in

- [[customer_specific]]

ProgramToPhone

The ProgramToPhone relationship represents a relationship between a program and a phone number.

Predicate types

- belongs_to
- identified_by
- uses
- has
- linked_to
- [[customer_specific]]

ProgramToURL

The ProgramToURL relationship represents a relationship between a program and a URL.

Predicate types

- has
- [[customer_specific]]

ProgramToPercent

The ProgramToPercent relationship represents a relationship between a program and a percentage.

Predicate types

- [[customer_specific]]

ProgramToMeasure

The ProgramToMeasure relationship represents a relationship between a program and a measure.

Predicate types

- age_of
- [[customer_specific]]

ProgramToHashtag

The ProgramToHashtag relationship represents a relationship between a program and a hashtag.

Predicate types

- [[customer_specific]]

ProgramToTimestamp

The ProgramToTimestamp relationship represents a relationship between a program and a timestamp.

Predicate types

- founded_
- date_of

- occurs
- [[customer_specific]]

ProgramToMoney

The ProgramToMoney relationship represents a relationship between a program and money.

Predicate types

- acquires_
- price_
- sends_
- [[customer_specific]]

ProgramToAward

The ProgramToAward relationship represents a relationship between a program and an award.

Predicate types

- acquires_
- received
- has
- win
- [[customer_specific]]

ProgramToScore

The ProgramToScore relationship represents a relationship between a program and a score.

Predicate types

- acquires_
- received
- has
- [[customer_specific]]

ProgramToIdeology

The ProgramToIdeology relationship represents a relationship between a program and an ideology.

Predicate types

- maintains
- belongs_to
- compensated_
- advise
- create
- invested_in
- sponsored
- launches

- [[customer_specific]]

ScoreToPercent

The ScoreToPercent relationship represents a relationship between a score and a percentage.

Predicate types

- gain_
- loss
- decrease_to
- [[customer_specific]]

TimestampToTransit

The TimestampToTransit relationship represents a relationship between a timestamp and a transit entity.

Predicate types

- founded_
- opened
- [[customer_specific]]

TimestampToIdeology

The TimestampToIdeology relationship represents a relationship between a timestamp and an ideology.

Predicate types

- founded_
- [[customer_specific]]

TimestampToMedical_Procedure

The TimestampToMedical_Procedure relationship represents a relationship between a timestamp and a medical procedure.

Predicate types

- date_of
- occurs
- [[customer_specific]]

TimestampToScore

The TimestampToScore relationship represents a relationship between a timestamp and a score.

Predicate types

- date_of
- [[customer_specific]]

TimestampToPunitive_Measure

The TimestampToPunitive_Measure relationship represents a relationship between a timestamp and a punitive measure.

Predicate types

- date_of
- conviction_
- [[customer_specific]]

HashtagToIdeology

The HashtagToIdeology relationship represents a relationship between a hashtag entity and an ideology.

Predicate types

- belongs_to
- referenced
- mentioned_in
- communicated_
- linked_to
- [[customer_specific]]

MoneyToIdeology

The MoneyToIdeology relationship represents a relationship between money and an ideology.

Predicate types

- made_
- lost
- access_to
- funded
- has
- monetary_earning
- laundered
- donate
- [[customer_specific]]

MoneyToImplement

The MoneyToImplement relationship represents a relationship between money and an implement.

Predicate types

- gain_
- funded
- loss
- acquires_

- penalize_
- price_
- value_of
- sells_
- [[customer_specific]]

MoneyToMedical_Procedure

The MoneyToMedical_Procedure relationship represents a relationship between money and a medical procedure.

Predicate types

- price_
- funded
- [[customer_specific]]

MoneyToFinancial_Index

The MoneyToFinancial_Index relationship represents a relationship between money and a financial index.

Predicate types

- price_
- is_evaluating
- [[customer_specific]]

MoneyToPercent

The MoneyToPercent relationship represents a relationship between money and a percentage.

Predicate types

- gain_
- loss
- sells_
- decrease_to
- compensated_
- [[customer_specific]]

Punitive_MeasureToIdeology

The Punitive_MeasureToIdeology relationship represents a relationship between a punitive measure and an ideology.

Predicate types

- mandate
- conviction_
- endorse
- [[customer_specific]]

Punitive_MeasureToMoney

The Punitive_MeasureToMoney relationship represents a relationship between a punitive measure and money.

Predicate types

- amount
- penalize_
- [[customer_specific]]

SocialToIdeology

The SocialToIdeology relationship represents a relationship between a social media identifier and an ideology.

Predicate types

- belongs_to
- mentioned_in
- uses
- communicated_
- [[customer_specific]]

SocialToTimestamp

The SocialToTimestamp relationship represents a relationship between a social media identifier and a timestamp.

Predicate types

- linked_to
- [[customer_specific]]

SocialToWeapon

The SocialToWeapon relationship represents a relationship between a social media identifier and a weapon.

Predicate types

- sells_
- acquires_
- [[customer_specific]]

Contact_BlockToEmail

The Contact_BlockToEmail relationship represents a relationship between a contact block and an email address.

Predicate types

- has
- [[customer_specific]]

Political_AffiliationToIdeology

The Political_AffiliationToIdeology relationship represents a relationship between a political affiliation and an ideology.

Predicate types

- belongs_to
- works_with
- compensated_
- negotiated_with
- participated_in
- [[customer_specific]]

Political_AffiliationToScore

The Political_AffiliationToScore relationship represents a relationship between a political affiliation and a score.

Predicate types

- acquires_
- received
- has
- announce
- [[customer_specific]]

Political_AffiliationToURL

The Political_AffiliationToURL relationship represents a relationship between a political affiliation and a URL.

Predicate types

- maintains
- belongs_to
- owns
- linked_to
- [[customer_specific]]

Political_AffiliationToPercent

The Political_AffiliationToPercent relationship represents a relationship between a political affiliation and a percentage.

Predicate types

- gain_
- acquires_
- decrease_to
- received
- has

- announce
- [[customer_specific]]

Political_AffiliationToMoney

The Political_AffiliationToMoney relationship represents a relationship between a political affiliation and money.

Predicate types

- acquires_
- compensated_
- access_to
- received
- uses
- has
- affected_by
- amplify
- linked_to
- [[customer_specific]]

GeneToGene

The GeneToGene relationship represents a relationship between one gene entity and another.

Predicate types

- transform
- like
- made_
- create
- uses
- convert
- targets
- linked_to
- [[customer_specific]]

GeneToMedical_Procedure

The GeneToMedical_Procedure relationship represents a relationship between a gene and a medical procedure.

Predicate types

- transform
- made_
- create
- uses
- convert

- targets
- [[customer_specific]]

GeneToDNA

The GeneToDNA relationship represents a relationship between a gene and DNA.

Predicate types

- transform
- made_
- create
- has
- convert
- targets
- [[customer_specific]]

CitationToIdeology

The CitationToIdeology relationship represents a relationship between a citation and an ideology.

Predicate types

- mentioned_in
- referenced
- [[customer_specific]]

TransitToScore

The TransitToScore relationship represents a relationship between a transit entity and a score.

Predicate types

- acquires_
- received
- has
- [[customer_specific]]

TransitToMoney

The TransitToMoney relationship represents a relationship between a transit entity and money.

Predicate types

- amount
- acquires_
- gain_
- lost
- price_
- [[customer_specific]]

TransitToMeasure

The TransitToMeasure relationship represents a relationship between a transit entity and a measure.

Predicate types

- [[customer_specific]]

AwardToAward

The AwardToAward relationship represents a relationship between one award and another.

Predicate types

- acquires_
- awarded_
- received
- has
- [[customer_specific]]

ImplementToGeocoordinate

The ImplementToGeocoordinate relationship represents a relationship between an implement and a geocoordinate.

Predicate types

- discover
- move_from
- move_to
- lost
- damaged
- made_
- location_of
- sends_
- received
- appears_
- [[customer_specific]]

BiometricToGeneric

The BiometricToGeneric relationship represents a relationship between a biometric entity and a generic entity.

Predicate types

- linked_to
- [[customer_specific]]

ControlToNon_Salient_Web_Content

The ControlToNon_Salient_Web_Content relationship represents a relationship between a control entity and a non-salient web content entity.

Predicate types

- takes_action
- [[customer_specific]]

Sentiment analysis

During extraction, i2 TextChart provides sentiment analysis at the entity and the document level to provide a detailed representation of the sentiment of the text.

This analysis leverages psycholinguistic research across multiple sentiment vectors to provide precise information about an author's language, and pinpoint documents that do not follow predicted patterns. Multi-vector sentiment analysis uses four metrics to help analysts identify outliers in their data, recognize heightened emotional language, sort data by media type, and subset large data sets into only the documents that require further assessment.

```
<lex>
  <word>arson</word>
  <aspect>-2</aspect>
  <intensity>3</intensity>
  <mood>-3</mood>
  <polarity>-3</polarity>
  <sv><CRIME/></sv>
</lex>
```

Aspect

What level of control is a reader likely to feel?

Aspect measures how controlled or in control the language in a text makes a reader feel.

Aspect is measured on a floating point scale ranging from #3 (controlled) to +3 (in control). Very positive or negative aspect values generally indicate that the author is part of the narrative, while neutral aspect values generally indicate that the author is not part of the narrative. Very negative values for aspect tend to indicate that the author is attempting to bully or dominate the reader, while very positive values tend to indicate that the author is attempting to persuade the reader.

For example, words like *abandonment* and *abduction* have a very negative aspect because these words tend to make readers feel a loss of control. By contrast, words like *accomplish* and *motivate* have a very positive aspect because readers tend to feel in control when reading these words.

Intensity

How motivated is a reader likely to be to react?

Intensity is a measurement of the level of activation used to describe a particular entity; in other words, whether an entity is activated/aroused or deactivated/calm. It is measured on a floating point scale ranging from 0 (no activation) to +3 (high activation).

Unlike polarity, mood, and aspect, intensity does not have a negative range.

Words like *catastrophic* or *prestigious* evoke a high level of activation with a value of +3, while words like *thermometer* and *syllabus* evoke a low level of activation with a value of 0.

Mood

How happy or sad is your text?

Mood is a measurement of the level of emotion of the language used to describe a particular entity in a document.

This measure roughly indicates the degree of happiness or sadness associated with the language.

While polarity measures the valence of the events themselves, mood measures an emotional response typically elicited in readers or listeners upon hearing the words. This metric is also computed at both the entity and document level, and represented as a floating point value on a scale from #3 (negative mood - "sad") to +3 (positive mood - "happy").

For example, words like *funny* and *affection* have a positive mood, while words like *cancer* and *racist* have a negative mood.

Polarity

How positive or negative is your text?

Polarity is a measurement of how positive, negative, or neutral the language is about a particular entity or the document as a whole, taking into consideration the salience of various words and phrases.

This metric is calculated at both the entity and document level, and is measured on a floating point scale from #3 (negative) to +3 (positive), where 0 represents neutral polarity.

For example, words like *elegant* and *strongest* have positive polarity, while words like *arson* and *lousy* have negative polarity.

Salience

How important is your text?

Salience refers to how important a word or phrase (or entity) is within a document or set of documents.

Entity extraction examples

This topic provides examples of how the i2 TextChart extraction process generates entities from plain text.

1. "i2 Group is located on **Milton Road** in Cambridge."

```
<entity type="ADDRESS">
  <value>Milton Road</value>
  <att name="subtype">physical_address</att>
</entity>
```

2. "**123456 N QD 123456 123456**"

```
<entity type="GEOCOORDINATE">
  <value>123456 N QD 123456 123456</value>
</entity>
```

3. "...which has received more than **\$5 billion** in American aid..."

```
<entity type="MONEY">
  <value>$5 billion</value>
  <norm>$5,000,000,000</norm>
</entity>
```

Relationship extraction examples

This topic provides examples of how the i2 TextChart extraction process identifies relationships from plain text.

1. "...Imam Samudra claimed **he was beaten by Indonesian police** after his capture."

```
<PSO type="PersonToOrg">
  <predicate>was beaten by</predicate>
  <subject>he</subject>
  <object>indonesian police</object>
</PSO>
```

2. "...CBS News, reporting on the **SARS** outbreak and other stories."

```
<PSO type="OrgToDisease">
  <predicate>, reporting on the</predicate>
  <subject>cbs news</subject>
  <object>sars</object>
</PSO>
```

3. "Admission: \$5 and **\$8. Ogden Memorial Church**, Main Street."

```
<PSO type="FacilityToMoney">
  <predicate>.</predicate>
  <subject>ogden memorial church</subject>
  <object>$8</object>
</PSO>
```

Predicate types

PSO Type	Definition
absolved_	An entity was set free from/by another entity
abuse	An entity was abused by another entity or committed abuse by or at another entity
access_to	An entity has access to another entity
accused	An entity is accused of or by another entity
acknowledge	An entity acknowledges another entity
acquires_	An entity acquired another entity
advertise	An entity promotes or sponsors another entity
advise	An entity advises, recommends, or warns another entity
affected_by	An entity is affected by another entity
afflicted_with	An entity is afflicted with another entity

PSO Type	Definition
against	An entity used another entity against something, or an entity is against another
age_of	The age of an entity
alleges	An entity alleges something about another entity
alias_of	The alias of a person entity
amount	The amount of an entity
amplify	An entity amplified or made another entity stronger
announce	An entity announces or declares intentions for another entity
appears_	An entity appears or emerges from, in, or at another entity
appointed	An entity appointed another entity
apprehended	An entity apprehended another
assists	An entity assists or aids another
at	An entity is located at another
attack_	An entity attacked another
attended	A person entity attended a named event
attests	An entity testifies, or attests to, another entity
author_of	An entity is the author of another entity
authorized	An entity authorized another entity to do something, or to occur
awarded_	An entity has been granted another
ban_	An entity placed an embargo on another entity
battle	An entity fights with another entity
belongs_to	An entity belongs to another entity

PSO Type	Definition
birth	The time or place of birth of an entity
branded	An entity has trademarked, labeled, or committed other proprietary action to another entity
burial	The date or place of burial of an entity
canceled	An entity canceled another entity
cared_for	An entity cared for another entity
caused	An entity caused, derived, relates to, or led to another entity
ceased	The time or place that an entity expired or ended
charged_with	An entity was a crime committed by another entity
child_parent_of	A son-of, daughter-of, or parent-of relationship
citizen_of	An entity belongs to a particular nationality
classifies	An organization, document, or other entity has been classified by another
closed	An entity closed an account of another entity
commits	An entity committed an action on another
complaints	An entity has issued complaints about another entity, or received them
communicated_	An entity communicated to, about, or with another entity
compensated_	An entity compensated monetarily or otherwise to another entity
competes_with	An entity competes against another
conclude	The conclusions, results, or findings of one entity on another
confronted	An entity confronted another entity
consider	An entity considers or scrutinizes another entity

PSO Type	Definition
contact	An entity contacts another entity
contracted_with	An entity is contracting with another entity
contribute	An entity contributes to another entity
cousin_of	A cousin-of relationship
convert	An entity converts another entity
conviction_	A relationship between two entities involving conviction
creed	An entity has a particular religious belief
create	An entity is created, started, originated, or began with another entity
criticize	An entity criticized another entity
damaged	An entity is damaged or altered in a manner below an ideal state
date_of	The date when an event/entity occurred/ completed an action
death	The place, age, or date of an entity's death
decrease_to	An entity decreased to a percent or another numeric entity
deceive	An entity has deceived or lied to another entity
demolished	An entity demolished another entity
denied	An entity denied another entity, or that another entity took place
depart	An entity leaves, resigns from, or vacates from another entity
describe	An entity describes another entity
died_from	An entity dies from the result of another entity
disagreed	An entity disagreed with or about another entity

PSO Type	Definition
discredit	An entity discredited another entity
discover	An entity discovered another entity
dispatched	An entity was dispatched to another entity
dispose	An entity disposes of an entity, or disposes at another entity
dissent	An entity dissented at the location of or about another entity
donate	An entity makes a donation of an entity, or donates to another entity
ein	An employer identification number for businesses
emailed	An entity emailed another entity
embargo	An entity placed an embargo on another entity
enclose	An entity enclosed upon or surrounded another entity
endorse	An entity promotes, endorses, or recommends another entity
enforce	An entity enforces a punishment or enforced its power upon another entity
employs	An entity employs another entity
entered	An entity entered another entity
escaped_from	An entity escaped from another entity
ethnic_group	An entity belongs to an ethnic group
evaluate_	An entity is evaluating a medical procedure or another entity
expert_on	An entity is an expert on another entity
expiration_date	An entity is an expiration date
failed_	An entity ended

PSO Type	Definition
familial_	An entity has a familial relationship with another
follows_	An entity is affiliated with, practices with, follows, or associates with another entity
formed	An entity formed another entity
founded_	An entity was founded in or on another entity
from_	An entity is from a place entity
funded	An entity funded another entity
gain_	A financial gain
gave_	An entity gave something to another entity, or gave an entity itself
govern_	An entity governs another entity
grandchild_grandparent_of	A grandparent-of or grandchild-of relationship
greatgrandchild_greatgrandparent_of	A great-grandparent-of or great-grandchild-of relationship
guaranteed	An entity guarantees or secures another entity
has	An entity has another entity
height_of	The height of an entity
hijacked	An entity has been hijacked by or at another entity
host	An entity is hosting another entity
identified_	An entity is identifiable to another entity
identified_by	An entity has an identification number
immunized_	An entity has been vaccinated, immunized, or inoculated against another entity
implements	An entity implements or enforces another entity, or an action upon another entity
improve	An entity improves another entity

PSO Type	Definition
incite_	An entity incites another entity
inform	An entity informs, reports to, or explains to another entity
initiated	An entity initiated another entity
inquire_	An entity inquires, examines, or analyzes another entity
influenced	An entity influenced another entity
instructs	An entity lectures, instructs, or addresses another entity
interviewed	An entity interviewed another entity
invade	An entity is invading or intruding upon another entity
invested_in	An entity is invested in another entity
involvement	An entity has involvement with another entity
is_applying	An entity is applying a medical procedure to another entity
is_banker_of	A person or organization entity is the banker of an organization, person, or POI
is_equivalent_to	An entity is a representation of the same real-world entity as another
is_subject_of	A person or organization entity is the subject of a legal filing
is_subscriber_of	A person or organization entity is the subscriber to a service
isolate	An entity isolates another entity
issued_	An entity is an issued another entity
kidnapped_	An entity kidnapped or was kidnapped by another
knows_	An entity knows another entity
launches	An entity has/is launching an event or product

PSO Type	Definition
like	An entity is like, similar to, associated with, connected to, or common to another entity
linked_to	An entity is linked to another entity
laundered	An entity laundered another entity
location_of	The place where an organization or facility entity is located
loss	A financial loss or loss in value
lost	An entity lost an entity
made_	An entity made another entity
mandate	An entity mandated another entity
maintains	An entity maintains another entity
make_improvements	An entity makes improvements to another entity
manages	An entity manages another entity
manipulates	An entity is negatively effecting another entity by means of control and deception
meet	An entity meets another entity
mentioned_in	An entity is mentioned in a publication
merger	An entity merges with or acquires another
monetary_earning	An entity has benefited monetarily from another entity
move_from	An entity moves from a place or facility
move_to	An entity moves to a place or facility
negotiated_with	An entity negotiated with another entity
nibling_of	A niece-of or nephew-of relationship
occurs	An entity occurs on or at another entity
opened	An entity opened an account or another entity

PSO Type	Definition
operates_in	An entity is active in a particular place
originated_	An entity originated from another
owes_	An entity owes another entity
owns	An entity owns another entity
participated_in	An entity participated in an event
penalize_	An entity penalized another entity
perform	An entity performs another entity
pibling_of	An aunt-of or uncle-of relationship
plotted_	An entity plotted or schemed against another entity
prevented_	An entity stopped another entity
price_	The price of an entity
prohibited_	An entity is prohibited by another entity
provider_of	An entity is a provider of another entity
published_in	The publication date of an entity
pursue	An entity is pursuing another entity
ranks	An entity ranks on a financial index
received	An entity received another entity
received_information	An entity received information from or about another entity
received_legal_assistance	An entity received legal assistance from another entity
recovered_from_	An entity has recovered, is in remission, is cured, or has been healed from another entity
referenced	An entity referred to or used a hashtag

PSO Type	Definition
region_served	The location and effect of an entity on a particular place
related_by_marriage	A relationship-in-law, or a step-relationship
related_to	A familial relationship between people
removed_from	A person entity is no longer with an organization
reported_to	An entity reported to another entity
researched	An entity researched another entity
seen	An entity was seen by or at another entity
select	An entity has selected another entity
sells_	An entity sells or sold another entity
sends_	An entity sent another entity, or sent something to another entity
separated_	An entity was separated from an entity, or separated entities from each other
services	The relationship or actions of an entity on a place
sexual_relations	An entity was involved in sexual relations with, by, or at another entity
sibling_of	A brother-of or sister-of relationship
sic	A standard industrial classification code for industry areas
signed	An entity signed another entity
speed	The speed of an entity
sponsored	An entity sponsored another entity
spouse_of	A husband-of or wife-of relationship
subject_of	An entity is the subject of a publication
served_by	An entity has been served by another entity

PSO Type	Definition
submitted	An entity submitted an entity, or submitted something to an entity
supplied	An entity supplied another entity
supports_	An entity has supported another entity in some capacity
studies	An entity studied, analyzed, diagnosed, or was processed by another entity
surrendered	An entity gave up or surrendered to another entity
surveil_	An entity is surveilling another entity
survived_	An entity survived or made it through an action caused by another entity
suspected	An entity is suspected by or suspects another entity
takes_action	An entity takes a particular action on another
targets	An entity targets, affects, connects, fuses, or bonds to another entity
terrified	An entity is terrified by another entity
threaten	An entity uses threatening actions against another entity
took	An entity took another entity
tracks	An entity tracks in the financial market
transform	An entity transforms another entity
travels_	Ad entity will travel or move
takes_control	An entity took control of another entity
treating	An entity treated another entity
trusts	An entity trusts or believes in another entity
undergo	An entity undergoes another entity, especially a medical procedure

PSO Type	Definition
united_	An entity has united with another entity
unveil	An entity unveils another entity
uses	An entity uses another entity, such as a drug or weapon
value_of	The value of an entity
variant_of	A known spelling variation of a person name
visited_	An entity visited a place entity
weight_of	The weight of an entity
win	An entity wins or triumphs over another entity
witnessed	An entity witnessed another entity
works_	A working relationship between entities
works_with	An entity works with another entity