

TAC KBP 2014 Event Argument Extraction Assessment

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Linguistic Data Consortium

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1 Introduction

Text Analysis Conference (TAC) is a series of workshops organized by the National Institute of Standards and Technology (NIST). TAC was developed to encourage research in natural language processing (NLP) and related applications by providing a large test collection, common evaluation procedures, and a forum for researchers to share their results. The Event Argument Extraction (EAE) task aims to extract information about entities and the role they play in an event.

In the EAE task, performing systems search documents for all of the event arguments that occur in those documents. An event's arguments are the entities that play a role in that event as well as other non-entity attributes of the event. The specific types of arguments that can play a role in an event will vary from event type to event type.

There are two parts to this assessment task. Primarily, you will be judging the validity of the responses (event arguments) returned. Secondly, you will group together all of the co-referring arguments into equivalence classes in order to arrive at a final number of unique responses. This document will guide you in the assessment of event arguments and in the creation of equivalence classes.

2 Entity Types

Only certain entity types are valid for each argument role. Entities that are arguments of an event are generally referred to as participants. Below are descriptions of the different entity types.

2.1 Person Entities (PER)

Each distinct person or set of people mentioned in a document refers to an entity of type Person. For example, people may be specified by name ("John Smith"), occupation ("the butcher"), family relation ("dad"), pronoun ("he"), etc., or by some combination of these.

2.2 Organization Entities (ORG)

Each organization or set of organizations mentioned in a document gives rise to an entity of type Organization. ORGs are corporations, agencies, and other groups of people defined by an established organizational structure. Note that musical groups are considered to be organizations but individual artists (e.g. Brittany Spears) are considered persons. Programs or projects should not be considered organizations and different iterations of the same organization (e.g., the 111th U.S. Congress and the 112th U.S. Congress) should not be considered as distinct entities.

2.3 Geo-Political Entities (GPE)

Each geo-political entity or set of geo-political entities mentioned in a document gives rise to an entity of type Geo-Political Entity. GPEs are composite entities comprised of a government, a physical location, and a population, with common types including countries, states, provinces, counties, cities, and towns. Note, however, that for the

purposes of TAC KBP, all top-level governments of GPEs should also be categorized as GPEs, not as ORGs.

2.4 Locations (LOC)

Places defined on a geographical or astronomical basis which are mentioned in a document and do not constitute a political entity give rise to Location entities. These include, for example, the solar system, Mars, the Hudson River, Mt. Everest, and Death Valley.

2.5 Facilities (FAC)

Facilities are functional, primarily man-made structures. These include buildings and similar facilities designed for human habitation, such as houses, factories, stadiums, office buildings, gymnasiums, prisons, museums, and space stations; objects of similar size designed for storage, such as barns, parking garages and airplane hangars; elements of transportation infrastructure, including streets, highways, airports, ports, train stations, bridges, and tunnels. Roughly speaking, facilities are artifacts falling under the domains of architecture and civil engineering.

2.6 Vehicles (VEH)

Vehicles are physical devices primarily designed to move an object from one location to another, by (for example) carrying, pulling, or pushing the transported object. Vehicle entities may or may not have their own power source. Examples include bicycles, aircraft carriers, rowboats, ships, tanks, automobiles, planes, helicopters, hang gliders, etc.

2.7 Weapons (WEA)

Weapons are physical devices that are primarily used as instruments for physically harming or destroying entities (whether the harmed entities are taggable or not).

3 Attribute Types

For some argument roles, something other than one of the above entity types is valid. Generally, these non-entity arguments are referred to as attributes. Below are descriptions of the different attribute types.

3.1 Crimes (CRIME)

Crimes are the explicitly expressed offenses associated with some Justice event. Only violations of the laws of a GPE are acceptable CRIME arguments. Violations of the rules of some organization (such as a sports team) are not acceptable CRIME arguments.

3.2 Sentences (SENTENCE)

Sentences are the explicitly expressed punishments associated with some Justice event. Only sentences issued by a state actor (a GPE, an ORG subpart of a GPE, or a PER representing one of these) are acceptable SENTENCE arguments.

3.3 Job-Titles (JOB)

Job-Titles are the explicitly expressed offices associated with some Personnel event. JOBS are official or unofficial names of the employment positions that have been held by a PER entity.

3.4 Money (MONEY)

A MONEY argument is mentioned whenever capital is described in terms of the currency of some country or region (e.g. *US Dollars* or *Euros*).

3.5 Time (TIME)

TIME arguments are calendar dates that can be inferred from a day or period of time mentioned in connection with an event.

Dates returned as TIME-args must be normalized. Systems have to normalize document text strings to standardized month, day, and/or year values, following the TIMEX2 format of yyyy-mm-dd (e.g., document text “New Year’s Day 1985” would be normalized as “1985-01-01”). If a full date cannot be inferred using document text and metadata, partial date normalizations are allowed using “X” for the missing information. For example:

- “May 4th” would be normalized as “XXXX-05-04”;
- “1985” would be normalized as “1985-XX-XX”;
- “the early 1900s” would be normalized as “19XX-XX-XX” (note that there is no aspect of the normalization that captures the “early” part of the filler).
- “the third week of June 2005” as “2005-06-XX”
- “the third week of 2005” may be returned as **either** “2005-XX-XX” or “2005-01-XX”.

4 Event Types

Event Argument Extraction is limited to the 30 event types defined below. Note that each event type has its own set of potential arguments. For all event type argument examples presented below, please remember that both TIME and PLACE are also valid roles for all event types even when not mentioned in the tables.

4.1 Life

4.1.1 Marry

MARRY Events are official Events, where two people are married under the legal definition.

MARRY Events have one participant slot (PERSON-ARG) and two attribute slots (TIME-ARG and PLACE-ARG).

Person-Arg	PER	The people who are married	<i>[ames] recruited her as an informant in 1983,</i>
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			<i>then married [her] two years later.</i>
Time-Arg	TIME	When the marriage takes place	<i>ames recruited her as an informant in 1983, then married her [two years later].</i>
Place-Arg	GPE LOC FAC	Where the marriage takes place	<i>We were married in [Spain]</i>

4.1.2 Divorce

A DIVORCE Event occurs whenever two people are officially divorced under the legal definition of divorce. We do not include separations or church annulments.

DIVORCE Events have one participant slot (PERSON-ARG) and two attribute slots (TIME-ARG and PLACE-ARG).

Person-Arg	PER	The people who are divorced	<i>the Princess confided in him a great deal, especially in the years preceding [her] divorce from the [heir] to the throne in 1996.</i>
Time-Arg	TIME	When the divorce takes place	<i>the Princess confided in him a great deal, especially in the years preceding her divorce from the heir to the throne in [1996].</i>
Place-Arg	GPE LOC FAC	Where the divorce takes place	

4.1.3 Injure

An INJURE Event occurs whenever a PERSON Entity experiences physical harm. INJURE Events can be accidental, intentional or self-inflicted.

INJURE Events have three participant slots (AGENT-ARG, VICTIM-ARG, and INSTRUMENT-ARG) and two attribute slots (TIME-ARG and PLACE-ARG).

Agent-Arg	PER ORG GPE	The attacking agent / The one that enacts the harm	<i>[Two Palestinians]</i> were killed as they staged a drive-by ambush on an Israeli jeep in the Gaza Strip near the Israeli settlement of Gush Katif Saturday afternoon, and two Israeli soldiers were wounded, one critically.
Victim-Arg	PER	The harmed person(s)	Two Palestinians were killed as they staged a drive-by ambush on an Israeli jeep in the Gaza Strip near the Israeli settlement of Gush Katif Saturday afternoon, and <i>[two Israeli soldiers]</i> were wounded, one critically.
Instrument-Arg	WEA VEH	The device used to inflict the harm	
Time-Arg	TIME	When the injuring takes place	Two Palestinians were killed as they staged a drive-by ambush on an Israeli jeep in the Gaza Strip near the Israeli settlement of Gush Katif <i>[Saturday afternoon]</i> , and two Israeli soldiers were wounded, one critically.
Place-Arg	GPE LOC FAC	Where the injuring takes place	Two Palestinians were killed as they staged a drive-by ambush on an

			<i>Israeli jeep in the Gaza Strip near [the Israeli settlement of Gush Katif] Saturday afternoon, and two Israeli soldiers were wounded, one critically.</i>
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4.1.4 Die

A DIE Event occurs whenever the life of a PERSON Entity ends. DIE Events can be accidental, intentional or self-inflicted.

DIE Events have three participant slots (AGENT-ARG, VICTIM-ARG, and INSTRUMENT-ARG) and two attribute slots (TIME-ARG and PLACE-ARG).

Agent-Arg	PER ORG GPE	The attacking agent / The killer	<i>Canadian authorities arrested [two Vancouver-area men] on Friday and charged them in the deaths of 329 passengers and crew members of an Air-India Boeing 747 that blew up over the Irish Sea in 1985, en route from Canada to London.</i>
Victim-Arg	PER	The person(s) who died	<i>Canadian authorities arrested two Vancouver-area men on Friday and charged them in the deaths of [329 passengers and crew members of an Air-India Boeing 747 that blew up over the Irish Sea in 1985, en route from Canada to</i>

			London].
Instrument-Arg	WEA VEH	The device used to kill	
Time-Arg	TIME	When the death takes place	<i>Canadian authorities arrested two Vancouver-area men on Friday and charged them in the deaths of 329 passengers and crew members of an Air-India Boeing 747 that blew up over the Irish Sea in [1985], en route from Canada to London.</i>
Place-Arg	GPE LOC FAC	Where the death takes place	<i>Canadian authorities arrested two Vancouver-area men on Friday and charged them in the deaths of 329 passengers and crew members of an Air-India Boeing 747 that blew up over [the Irish Sea] in 1985, en route from Canada to London.</i>

4.2 Movement

4.2.1 Transport

A TRANSPORT Event occurs whenever movement from one PLACE (GPE, FACILITY, LOCATION) to another PLACE is mentioned. Explicit movement within one PLACE is not a TRANSPORT event (e.g. the sentence “Sue walked down the hall” does not contain a TRANSPORT event because the ‘movement’ occurs within a single FACILITY).

TRANSPORT Events have six participant slots (AGENT-ARG, ARTIFACT-ARG, VEHICLE-ARG, PRICE-ARG, ORIGIN-ARG, and DESTINATION-ARG) and one attribute slot (TIME-ARG).

Arguments of a TRANSPORT event (other than ARTIFACT-ARG) are correct even when no ARTIFACT is explicitly mentioned or the ARTIFACT is not a PERSON, WEAPON, or VEHICLE.

Agent-Arg	PER ORG GPE	The agent responsible for the transport Event.	<i>The Palestinian leaders also warned that [Israel] must remove its soldiers from the outskirts of Palestinian cities.</i>
Artifact-Arg	PER WEA VEH	The person doing the traveling or the artifact being transported	<i>The Palestinian leaders also warned that Israel must remove [its soldiers] from the outskirts of Palestinian cities.</i>
Vehicle-Arg	VEH	The vehicle used to transport the person or artifact	
Price-Arg	NUM	The price of transporting the person or artifact	
Origin-Arg	GPE LOC FAC	Where the transporting originated	<i>The Palestinian leaders also warned that Israel must remove its soldiers from [the outskirts of Palestinian cities].</i>
Destination-Arg	GPE LOC FAC	Where the transporting is directed	
Time-Arg	TIME	When the transporting takes place	

4.3 Transaction

4.3.1 Transfer-Ownership

TRANSFER-OWNERSHIP Events refer to events comprised of buying, selling, loaning, borrowing, giving, or receiving something other than money.

TRANSFER-OWNERSHIP Events have five participant slots (BUYER-ARG, SELLER-ARG, BENEFICIARY-ARG, ARTIFACT-ARG, and PRICE-ARG) and two attribute slots (TIME-ARG and PLACE-ARG)

Arguments of a TRANSFER-OWNERSHIP event (other than ARTIFACT-ARG) are correct even when no ARTIFACT is explicitly mentioned or the ARTIFACT is not a WEAPON, VEHICLE, FACILITY or ORGANIZATION.

Buyer-Arg	PER ORG GPE	The buying agent	<i>the [man] accused of killing seven people near Boston on Tuesday got his guns in Massachusetts</i>
Seller-Arg	PER ORG GPE	The selling agent	
Beneficiary-Arg	PER ORG GPE	The agent that benefits from the transaction	<i>His brother bought [him] a new car.</i>
Artifact-Arg	VEH WEA FAC ORG	The item or ORGANIZATION that was bought or sold	<i>the man accused of killing seven people near Boston on Tuesday got [his guns] in Massachusetts</i>
Price-Arg	MONEY	The sale price of the ARTIFACT-ARG	<i>The giant luxury conglomerate LVMH-Moet Hennessy Louis Vuitton, ..., has offered to acquire Donna Karan International for [\$195 million] in a cash deal...</i>
Time-Arg	TIME	When the sale takes place	
Place-Arg	GPE LOC FAC	Where the sale takes place	<i>the man accused of killing seven people near Boston on Tuesday got his guns in [Massachusetts]</i>

4.3.2 Transfer-Money

TRANSFER-MONEY Events refer to the giving, receiving, borrowing, or lending money when it is not in the context of purchasing something. Some examples are: (1) people giving money to organizations (and getting nothing tangible in return); and (2) organizations lending money to people or other orgs. When money is transferred as a

part of a Transfer-Ownership event, a Transfer-Money event is not present (i.e. Transfer-Ownership trumps Transfer-Money).

TRANSFER-MONEY Events have four participant slots (GIVER-ARG, RECIPIENT-ARG, BENEFICIARY-ARG, and MONEY-ARG) and 2 attribute slots (TIME-ARG and PLACE-ARG).

Giver-Arg	PER ORG GPE	The donating agent	
Recipient-Arg	PER ORG GPE	The recipient agent	<i>I'd like to see them accept his offer," said Jean Dolan, 59, a retired singing instructor [who] borrowed about \$10,500 to buy Eircom shares in the IPO in July 1999.</i>
Beneficiary-Arg	PER ORG GPE	The agent that benefits from the transfer	
Money-Arg	MONEY	The amount given, donated or loaned	<i>I'd like to see them accept his offer," said Jean Dolan, 59, a retired singing instructor who borrowed about [\$10,500] to buy Eircom shares in the IPO in July 1999.</i>
Time-Arg	TIME	When the amount is transferred	
Place-Arg	GPE LOC FAC	Where the transaction takes place	

4.4 Business

4.4.1 Merge-Org

A MERGE-ORG Event occurs whenever two or more ORGANIZATION Entities come together to form a new ORGANIZATION Entity. This Event applies to any kind of ORGANIZATION, including government agencies. It also includes joint ventures.

MERGE-ORG Events have one participant slot (ORG-ARG) and two attribute slots (TIME-ARG and PLACE-ARG).

Org-Arg	ORG	The ORGANIZATIONs that are merged	[Parkhurst] later merged with [another company] that owned Road & Track to become Bond/Parkhurst Publishing.
Time-Arg	TIME	When the merger takes place	
Place-Arg	GPE LOC FAC	Where the merger takes place	

4.4.2 Declare-Bankruptcy

A DECLARE-BANKRUPTCY Event will occur whenever an Entity officially requests legal protection from debt collection due to an extremely negative balance sheet.

DECLARE-BANKRUPTCY Events have one participant slot (ORG-ARG) and two attribute slots (TIME-ARG and PLACE-ARG).

Org-Arg	ORG PER GPE	The ORGANIZATION declaring bankruptcy	[Orange County] declared bankruptcy in 1995.
Time-Arg	TIME	When the bankruptcy is declared	Orange County declared bankruptcy in [1995] .
Place-Arg	GPE LOC FAC	Where the declaration takes place	

4.5 Conflict

4.5.1 Attack

An ATTACK Event is defined as a violent physical act. In addition to specific attacks being carried out against some Target, the ATTACK Event type includes less specific violence such as ‘conflict’, ‘clashes’, and ‘fighting’. A ‘coup’ is a kind of ATTACK (and so is a ‘war’).

ATTACK Events have three participant slots (ATTACKER-ARG, TARGET-ARG and INSTRUMENT-ARG) and two attribute slots (TIME-ARG and PLACE-ARG).

Attacker-Arg	PER ORG GPE	The attacking/instigating agent	<i>A number of [demonstrators] threw stones and empty bottles at Israeli soldiers positioned near a Jewish holy site at the town's entrance.</i>
Target-Arg	PER ORG VEH FAC WEA	The target of the attack (including unintended targets)	<i>A number of demonstrators threw stones and empty bottles at [Israeli soldiers] positioned near a Jewish holy site at the town's entrance.</i>
Instrument-Arg	WEA VEH	The instrument used in the attack	<i>A number of demonstrators threw [stones and empty bottles] at Israeli soldiers positioned near a Jewish holy site at the town's entrance.</i>
Time-Arg	TIME	When the attack takes place	
Place-Arg	GPE LOC FAC	Where the attack takes place	<i>A number of demonstrators threw stones and empty bottles at Israeli soldiers positioned near [a Jewish holy site at the town's entrance].</i>

4.5.2 Demonstrate

A DEMONSTRATE Event occurs whenever a large number of people come together in a public area to protest or demand some sort of official action. DEMONSTRATE Events include, but are not limited to, protests, sit-ins, strikes, and riots.

DEMONSTRATE Events have one participant slot (ENTITY-ARG) and two attribute slots (TIME-ARG and PLACE-ARG).

Entity-Arg	PER ORG	The demonstrating agent	<i>[More than 40,000 workers] were back at their jobs Thursday following a 1-day walkout that closed social welfare offices and crippled public medical services.</i>
Time-Arg	TIME	When the demonstration takes place	
Place-Arg	LOC GPE FAC	Where the demonstration takes place	

4.6 Contact

4.6.1 Meet

A MEET Event occurs whenever Entities come together at a single location and interact with one another face-to-face. MEET Events include talks, summits, conferences, meetings, visits, and any other Event where parties get together at some location.

MEET Events have one participant slot (ENTITY-ARG) and two attribute slots (TIME-ARG and PLACE-ARG)

Arguments of a MEET event (other than ENTITY-ARG) are correct even when no ENTITY is explicitly mentioned (or only one ENTITY is mentioned).

Entity-Arg	PER ORG GPE	The agents who are meeting	<i>[Mr. Erekat] is due to travel to Washington to meet with [US Secretary of State Madeleine Albright and other US officials] attempting to win a ceasefire.</i>
Time-Arg	TIME	When the meeting takes place	
Place-Arg	GPE LOC FAC	Where the meeting takes place	<i>Mr. Erekat is due to travel to [Washington] to meet with US</i>

			<i>Secretary of State Madeleine Albright and other US officials attempting to win a ceasefire.</i>
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4.6.2 Phone-Write

A PHONE-WRITE Event occurs when people directly engage in discussion which does not take place ‘face-to-face’. To make this Event less open-ended, we limit it to written or telephone communication. Communication that takes place in person should be considered a MEET Event. The very common ‘*PERSON told reporters*’ is **not** a taggable Event, nor is ‘*issued a statement*’. A PHONE-WRITE Event must be explicit phone or written communication. Written communication includes emails, text messages, and other written digital communication.

PHONE-WRITE Events have one participant slot (ENTITY-ARG) and one attribute slot (TIME-ARG)

Arguments of a PHONE-WRITE event (other than ENTITY-ARG) are correct even when no ENTITY is explicitly mentioned (or only one ENTITY is mentioned).

Entity-Arg	PER ORG GPE	The communicating agents	<i>[People] can communicate with [international friends] without the hefty phone bills.</i>
Time-Arg	TIME	When the communication takes place	

4.7 Personnel

4.7.1 Start-Position

A START-POSITION Event occurs whenever a PERSON Entity begins working for (or changes offices within) an ORGANIZATION or GPE. This includes government officials starting their terms, whether elected or appointed.

START-POSITION Events have two participant slots (PERSON-ARG and ENTITY-ARG) and three attribute slots (POSITION-ARG, TIME-ARG and PLACE-ARG).

Person-Arg	PER	the employee	<i>In 1997, the company hired [John D. Idol] to</i>
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			<i>take over as chief executive.</i>
Entity-Arg	ORG GPE	the employer	<i>In 1997, [the company] hired John D. Idol to take over as chief executive.</i>
Position-Arg	JOB	The <i>JOB-TITLE</i> for the position being started	<i>In 1997, the company hired John D. Idol to take over as [chief executive].</i>
Time-Arg	TIME	When the employment relationship begins	<i>In [1997], the company hired John D. Idol to take over as chief executive.</i>
Place-Arg	GPE LOC FAC	Where the employment relationship begins	

4.7.2 End-Position

An END-POSITION Event occurs whenever a PERSON Entity stops working for (or changes offices within) an ORGANIZATION or GPE. The change of office case will only be taggable when the office being left is explicitly mentioned within the scope of the Event. This includes government officials ending terms, whether elected or appointed.

END-POSITION Events have two participant slots (PERSON-ARG and ENTITY-ARG) and three attribute slots (POSITION-ARG, TIME-ARG and PLACE-ARG).

Person-Arg	PER	the employee	<i>Georgia fired football coach [Jim Donnan] Monday after a disappointing 7-4 season that started with the Bulldogs ranked No. 10 and picked to win the SEC East, his players said.</i>
Entity-Arg	ORG GPE	the employer	<i>[Georgia] fired football coach Jim Donnan Monday after a disappointing 7-4 season that started with the Bulldogs ranked No. 10</i>

			<i>and picked to win the SEC East, his players said.</i>
Position-Arg	JOB	The <i>JOB-TITLE</i> for the position being ended	<i>Georgia fired [football coach] Jim Donnan Monday after a disappointing 7-4 season that started with the Bulldogs ranked No. 10 and picked to win the SEC East, his players said.</i>
Time-Arg	TIME	When the employment relationship ends	<i>Georgia fired football coach Jim Donnan [Monday] after a disappointing 7-4 season that started with the Bulldogs ranked No. 10 and picked to win the SEC East, his players said.</i>
Place-Arg	GPE LOC FAC	Where the employment relationship ends	

4.7.3 Nominate

A NOMINATE Event occurs whenever a PERSON is proposed for a START-POSITION Event by the appropriate PERSON, through official channels.

NOMINATE Events have two participant slots (PERSON-ARG and AGENT-ARG) and three attribute slots (POSITION-ARG, TIME-ARG and PLACE-ARG).

Person-Arg	PER	the person(s) nominated	<i>One of those difficult-to-dislodge judges was [John Marshall], nominated by Adams to be chief justice.</i>
Agent-Arg	PER ORG GPE	the nominating agent	<i>One of those difficult-to-dislodge judges was John Marshall,</i>

	FAC		<i>nominated by [Adams] to be chief justice.</i>
Position-Arg	JOB	The <i>JOB-TITLE</i> for the position being nominated to	<i>One of those difficult-to-dislodge judges was John Marshall, nominated by Adams to be [chief justice].</i>
Time-Arg	TIME	When the nomination takes place	
Place-Arg	GPE LOC FAC	Where the nomination takes place	

4.7.4 Elect

An ELECT Event occurs whenever a candidate wins an election designed to determine the PERSON argument of a START-POSITION Event.

ELECT Events have two participant slots (PERSON-ARG and AGENT-ARG) and three attribute slots (POSITION-ARG, TIME-ARG and PLACE-ARG).

Person-Arg	PER	the person elected	<i>[Greg Lashutka] was elected mayor of Columbus in 1993.</i>
Entity-Arg	PER ORG GPE	the voting agent(s)	
Position-Arg	JOB	The <i>JOB-TITLE</i> for the position being nominated to	<i>Greg Lashutka was elected [mayor of Columbus] in 1993.</i>
Time-Arg	TIME	When the election takes place	<i>Greg Lashutka was elected mayor of Columbus in [1993].</i>
Place-Arg	GPE LOC FAC	Where the election takes place	<i>Greg Lashutka was elected mayor of [Columbus] in 1993.</i>

4.8 Justice

4.8.1 Arrest-Jail

A JAIL Event occurs whenever the movement of a PERSON is constrained by a state actor (a GPE, its ORGANIZATION subparts, or its PERSON representatives).

An ARREST Event occurs whenever a state actor (GPE, ORGANIZATION subpart, or PERSON representative) takes official custody of a PERSON Entity for the purposes of evaluating legal liability in a criminal activity.

ARREST-JAIL Events have two participant slots (PERSON-ARG, and AGENT-ARG) and three attribute slots (CRIME-ARG, TIME-ARG and PLACE-ARG).

Person-Arg	PER	the person who is jailed or arrested	<i>[Abu Talb, the last major prosecution witness], has been jailed in Sweden for attacks against Jewish and American targets in Europe.</i>
Agent-Arg	PER ORG GPE	the jailer or the arresting agent	<i>[Florida police] arrested James Harvey in Coral Springs on Friday.</i>
Crime-Arg	CRIME	The CRIME for which the PERSON-ARG is being jailed or arrested	<i>Abu Talb, the last major prosecution witness, has been jailed in Sweden for [attacks against Jewish and American targets in Europe].</i>
Time-Arg	TIME	When the person is arrested or sent to jail	<i>Florida police arrested James Harvey in Coral Springs on [Friday].</i>
Place-Arg	GPE LOC FAC	Where the person is arrested or where they are in jail	<i>Abu Talb, the last major prosecution witness, has been jailed in [Sweden] for attacks against Jewish and American targets in Europe.</i>

4.8.2 Release-Parole

A RELEASE-PAROLE Event occurs whenever a state actor (GPE, ORGANIZATION subpart, or PERSON representative) ends its custody of a PERSON Entity. This can

be because the sentence has ended, because the charges are dropped, or because parole has been granted.

RELEASE-PAROLE Events have two participant slots (PERSON-ARG and ENTITY-ARG) and three attribute slots (CRIME-ARG, TIME-ARG and PLACE-ARG).

Person-Arg	PER	the person who is released	<i>Russian President Vladimir Putin says he will pardon and release [American businessman Edmond Pope].</i>
Entity-Arg	PER ORG GPE	the former captor agent(s)	<i>[Russian President Vladimir Putin] says he will pardon and release American businessman Edmond Pope.</i>
Crime-Arg	CRIME	The <i>CRIME</i> for which the released <i>PERSON</i> was being held	
Time-Arg	TIME	When the release takes place	
Place-Arg	GPE LOC FAC	Where the release takes place	

4.8.3 Trial-Hearing

A TRIAL Event occurs whenever a court proceeding has been initiated for the purposes of determining the guilt or innocence of a PERSON, ORGANIZATION or GPE accused of committing a crime.

A HEARING Event occurs whenever a state actor (GPE, ORGANIZATION subpart, or PERSON representative) officially gathers to discuss some criminal legal matter.

TRIAL-HEARING Events have three participant slots (DEFENDANT-ARG, PROSECUTOR-ARG and ADJUDICATOR-ARG) and three attribute slots (CRIME-ARG, TIME-ARG and PLACE-ARG).

Defendant-Arg	PER ORG GPE	the agent on trial	<i>Clinton also touched on the matter of American Edmond Pope [who] is being tried in a closed court</i>
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			<i>in Russia on charges of spying.</i>
Prosecutor-Arg	PER ORG GPE	The prosecuting agent	
Adjudicator-Arg	PER ORG GPE	the judge or court	<i>Clinton also touched on the matter of American Edmond Pope who is being tried in [a closed court] in Russia on charges of spying.</i>
Crime-Arg	CRIME	The CRIME for which the DEFENDANT-ARG is being tried	<i>Clinton also touched on the matter of American Edmond Pope who is being tried in a closed court in Russia on charges of [spying].</i>
Time-Arg	TIME	When the trial takes place	<i>At a preliminary hearing [Friday afternoon], Sauls made it clear he would take a no-nonsense approach to the trial</i>
Place-Arg	GPE LOC FAC	Where the trial takes place	<i>Clinton also touched on the matter of American Edmond Pope who is being tried in a closed court in [Russia] on charges of spying.</i>

4.8.4 Charge-Indict

A CHARGE Event occurs whenever a PERSON, ORGANIZATION or GPE is accused of a crime by a state actor (GPE, an ORGANIZATION subpart of a GPE or a PERSON representing a GPE).

An INDICT Event occurs whenever a state actor (GPE, ORG subpart of a GPE or PERSON agent of a GPE) takes official legal action to follow up on an accusation.

CHARGE-INDICT Events have three participant slots (DEFENDANT-ARG, PROSECUTOR-ARG and ADJUDICATOR-ARG) and three attribute slots (CRIME-ARG, TIME-ARG and PLACE-ARG).

Defendant-Arg	PER ORG GPE	the agent that is indicted	<i>[Joy Fenter] was indicted by a grand jury on eleven counts of mail fraud.</i>
Prosecutor-Arg	PER ORG GPE	the agent bringing charges or executing the indictment	<i>Joy Fenter was indicted by [a grand jury] on eleven counts of mail fraud</i>
Adjudicator-Arg	PER ORG GPE	the judge or court	
Crime-Arg	CRIME	The CRIME for which the DEFENDANT-ARG is being indicted	<i>Joy Fenter was indicted by a grand jury on [eleven counts of mail fraud].</i>
Time-Arg	TIME	When the indictment takes place	<i>Appointed to the federal bench in 1979, he was charged [two years later] with conspiracy to accept a bribe in a case he presided over in Miami.</i>
Place-Arg	GPE LOC FAC	Where the indictment takes place	

4.8.5 Sue

A SUE Event occurs whenever a court proceeding has been initiated for the purposes of determining the liability of a PERSON, ORGANIZATION or GPE accused of committing a crime or neglecting a commitment. It can have a CRIME attribute filled by a string from the text. It is **not** important that the PLAINTIFF-ARG be a state actor (a GPE, an ORGANIZATION subpart or a PERSON representing them).

SUE Events have three participant slots (PLAINTIFF-ARG, DEFENDANT-ARG and ADJUDICATOR-ARG) and three attribute slots (CRIME-ARG, TIME-ARG and PLACE-ARG).

Plaintiff-Arg	PER ORG GPE	The suing agent	[Donald Crutchfield] <i>filed suit against Toys 'R' Us in 1997.</i>
Defendant-Arg	PER ORG GPE	The agent being sued	<i>Donald Crutchfield filed suit against [Toys 'R' Us] in 1997.</i>
Adjudicator-Arg	PER ORG GPE	the judge or court	
Crime-Arg	CRIME	The CRIME (or offense) for which the DEFENDANT-ARG is being sued	
Time-Arg	TIME	When the suit takes place	<i>Donald Crutchfield filed suit against Toys 'R' Us in [1997].</i>
Place-Arg	GPE LOC FAC	Where the suit takes place	

4.8.6 Convict

A CONVICT Event occurs whenever a TRY Event ends with a successful prosecution of the DEFENDANT-ARG. In other words, a PERSON, ORGANIZATION or GPE Entity is convicted whenever that Entity has been found guilty of a CRIME. It can have a CRIME attribute filled by a string from the text. CONVICT Events will also include guilty pleas.

CONVICT Events have two participant slots (DEFENDANT-ARG and ADJUDICATOR-ARG) and three attribute slots (CRIME-ARG, TIME-ARG and PLACE-ARG).

Defendant-Arg	PER ORG GPE	The convicted agent(s)	<i>A Russian court convicted [Pope] Wednesday on espionage charges and sentenced him to 20 years in prison.</i>
Adjudicator-Arg	PER ORG	The judge or court	[A Russian court] <i>convicted Pope</i>

	GPE		<i>Wednesday on espionage charges and sentenced him to 20 years in prison.</i>
Crime-Arg	CRIME	The CRIME for which the DEFENDANT-ARG has been convicted	<i>A Russian court convicted Pope Wednesday on [espionage] charges and sentenced him to 20 years in prison.</i>
Time-Arg	TIME	When the conviction takes place	<i>A Russian court convicted Pope [Wednesday] on espionage charges and sentenced him to 20 years in prison.</i>
Place-Arg	GPE LOC FAC	Where the conviction takes place	

4.8.7 Sentence

A SENTENCE Event takes place whenever the punishment (particularly incarceration) for the DEFENDANT-ARG of a TRY Event is issued by a state actor (a GPE, an ORGANIZATION subpart or a PERSON representing them). It can have a CRIME-ARG attribute filled by a CRIME Value and a SENTENCE-ARG attribute filled by a SENTENCE Value.

SENTENCE Events have two participant slots (DEFENDANT-ARG and ADJUDICATOR-ARG) and four attribute slots (CRIME-ARG, TIME-ARG PLACE-ARG and SENTENCE-ARG).

Defendant-Arg	PER ORG GPE	The agent who is sentenced	<i>[46-year-old Abu Talib] was sentenced to life imprisonment in 1990 in Sweden for terrorist acts in Amsterdam, Copenhagen and Stockholm between 1985 and 1986.</i>
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Adjudicator-Arg	PER ORG GPE	The judge or court	
Crime-Arg	CRIME	The CRIME for which the PERSON-ARG is being sentenced	<i>46-year-old Abu Talib was sentenced to life imprisonment in 1990 in Sweden for [terrorist acts in Amsterdam, Copenhagen and Stockholm between 1985 and 1986].</i>
Sentence-Arg	SEN	The sentence	<i>46-year-old Abu Talib was sentenced to [life imprisonment] in 1990 in Sweden for terrorist acts in Amsterdam, Copenhagen and Stockholm between 1985 and 1986.</i>
Time-Arg	TIME	the time of the sentencing Event	<i>46-year-old Abu Talib was sentenced to life imprisonment in [1990] in Sweden for terrorist acts in Amsterdam, Copenhagen and Stockholm between 1985 and 1986.</i>
Place-Arg	GPE LOC FAC	Where the sentencing takes place	<i>46-year-old Abu Talib was sentenced to life imprisonment in 1990 in [Sweden] for terrorist acts in Amsterdam, Copenhagen and Stockholm between 1985 and 1986.</i>

4.8.8 Fine

A FINE Event takes place whenever a state actor issues a financial punishment to a GPE, PERSON or ORGANIZATION Entity, typically as a result of court proceedings. It can have a CRIME attribute filled by a string from the text.

Please note that settlements between two parties will **not** be annotated as FINE Events, but rather as TRANSFER-MONEY Events. This will be true even when the settlement is brought about by some other JUSTICE Event (such as a SUE Event).

FINE Events have three argument slots (ENTITY-ARG, ADJUDICATOR-ARG and MONEY-ARG) and three attribute slots (CRIME-ARG, TIME-ARG and PLACE-ARG).

Entity-Arg	PER ORG GPE	the Entity that was fined	<i>[The company] was ordered to pay a fine of \$300,000.</i>
Adjudicator-Arg	PER ORG GPE	the Entity doing the fining	
Money-Arg	NUM	The amount of the fine	<i>The company was ordered to pay a fine of [\$300,000].</i>
Crime-Arg	CRIME	The CRIME (or offence) for which the ENTITY-ARG is being fined	
Time-Arg	TIME	When the fining Event takes place	
Place-Arg	GPE LOC FAC	Where the fining Event takes place	

4.8.9 Execute

An EXECUTE Event occurs whenever the life of a PERSON is taken by a state actor (a GPE, its ORGANIZATION subparts, or PERSON representatives). It can have a CRIME attribute filled by a string from the text.

EXECUTE Events have two participant slots (PERSON-ARG and AGENT-ARG) and three attribute slots (CRIME-ARG, TIME-ARG and PLACE-ARG).

Person-Arg	PER	The person executed	<i>[David Goran] was executed by lethal injection in March 1987.</i>
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Agent-Arg	PER ORG GPE	The agent responsible for carrying out the execution	
Crime-Arg	CRIME	The CRIME for which the PERSON-ARG is being executed	
Time-Arg	TIME	When the execution takes place	<i>David Goran was executed by lethal injection in [March 1987].</i>
Place-Arg	GPE LOC FAC	Where the execution takes place	

4.8.10 Extradite

An EXTRADITE Event occurs whenever a PERSON is sent by a state actor from one PLACE (normally the GPE associated with the state actor, but sometimes a FACILITY under its control) to another place (LOCATION, GPE or FACILITY) for the purposes of legal proceedings there.

EXTRADITE Events have four participant slots (AGENT-ARG, PERSON-ARG, DESTINATION-ARG and ORIGIN-ARG) and two attribute slots (CRIME-ARG and TIME-ARG).

Agent-Arg	PER ORG GPE	the extraditing agent	
Person-Arg	PER	The person being extradicted	<i>In the end, [Milosevic] may even prefer extradition to The Hague rather than stay here and face our justice," said opposition leader Zarko Korac.</i>
Destination-Arg	GPE LOC FAC	Where the person is extradited to, the destination	<i>In the end, Milosevic may even prefer extradition to [The Hague] rather than stay here and face our justice," said opposition</i>

			<i>leader Zarko Korac.</i>
Origin-Arg	GPE LOC FAC	The original location of the person being extradited (rare ... only when explicitly mentioned)	<i>In the end, Milosevic may even prefer extradition to The Hague rather than stay [here] and face our justice," said opposition leader Zarko Korac.</i>
Crime-Arg	CRIME	The CRIME for which the PERSON-ARG is being extradited	
Time-Arg	TIME	When the extradition takes place	

4.8.11 Acquit

An ACQUIT Event occurs whenever a trial ends but fails to produce a conviction. This will include cases where the charges are dropped by the PROSECUTOR-ARG.

ACQUIT Events have two participant slots (DEFENDANT-ARG and ADJUDICATOR-ARG) and three attribute slots (CRIME-ARG, TIME-ARG and PLACE-ARG).

Defendant-Arg	PER ORG GPE	The agent being acquitted	<i>[He] was acquitted by a jury in 1983, but a panel of judges reopened the case four years later, accusing him of both the original crime and lying about it under oath.</i>
Adjudicator-Arg	PER ORG GPE	the judge or court	<i>He was acquitted by [a jury] in 1983, but a panel of judges reopened the case four years later, accusing him of both the original crime and lying about it under oath.</i>
Crime-Arg	CRIME	The CRIME of which the DEFENDANT-ARG is being	
Time-Arg	TIME	When the acquittal takes	<i>He was acquitted by a</i>

		place	<i>jury in [1983], but a panel of judges reopened the case four years later, accusing him of both the original crime and lying about it under oath.</i>
Place-Arg	GPE LOC FAC	Where the acquittal takes place	

4.8.12 Pardon

A PARDON Event occurs whenever a head-of-state or their appointed representative lifts a sentence imposed by the judiciary.

PARDON Events have two participant slots (DEFENDANT-ARG and ADJUDICATOR-ARG) and three attribute slots (CRIME-ARG, TIME-ARG and PLACE-ARG).

Defendant-Arg	PER ORG GPE	The agent being pardoned	<i>[Pope] was released today after receiving a pardon from Russian President Vladimir Putin.</i>
Adjudicator-Arg	PER ORG GPE	the state official who does the pardoning	<i>Pope was released today after receiving a pardon from [Russian President Vladimir Putin]</i>
Crime-Arg	CRIME	The CRIME of which the DEFENDANT-ARG is being pardoned	
Time-Arg	TIME	When the pardon takes place	
Place-Arg	GPE LOC FAC	Where the pardon takes place	

4.8.13 Appeal

An APPEAL Event occurs whenever the decision of a court is taken to a higher court for review.

APPEAL Events have three participant slots (DEFENDANT-ARG, PROSECUTOR-ARG and ADJUDICATOR-ARG) and three attribute slots (CRIME-ARG, TIME-ARG and PLACE-ARG).

Defendant-Arg	PER ORG GPE	The defendant	<i>The defendant said [he] will appeal.</i>
Prosecutor-Arg	PER ORG GPE	The prosecuting agent	
Adjudicator-Arg	PER ORG GPE	The judge or court	
Crime-Arg	CRIME	The CRIME which is the subject of the appeal	
Time-Arg	TIME	When the appeal takes place	
Place-Arg	GPE LOC FAC	Where the appeal takes place	

5 Inference and World Knowledge

In the Event Argument Extraction task, answers are marked as correct if a reasonable reader would interpret the supporting document as evidence that the different parts of the answer are correct. Answers are considered correct even if such a judgment is derived through inference rather than, for example, a direct linguistic connection between an event-trigger and an argument. For purposes of this task, systems are permitted to infer **argument participation** through links between events. However, they are not permitted to infer the **occurrence** of one event from another.

5.1 Inferring Arguments

Inferences of arguments may include inferring causality or part-of relations between the verbal-events in a passage, inferring locations through part-of relations, etc. For example, an Agent argument of Life.Injure could be inferred from an Attacker argument of Conflict.Attack. While world-knowledge on its own is not a sufficient reason for a correct answer, such knowledge can contribute to a reasonable reader's assessment. For example, while every instance of a known terrorist group cannot be assumed to be

an instance of (Conflict.Attack, Attacker), knowledge that a group has participated in terrorist activities can contribute to a reader’s interpretation of vaguely worded text. In such cases, you are instructed to judge “Does this document support the Event Type, Argument Role, Canonical Argument String, and Realis Label?” Inference about geographical locations (e.g. Cambridge in Massachusetts vs. Cambridge in England) will be assessed using similar guidance.

5.2 Invalid Inference of Events from Other Events

For the purposes of this task, systems are not permitted to infer events from other events. This does not preclude the same text from itself justifying multiple event types (e.g. *shot* in some contexts triggers both injury and attack). This principle applies to all event types. Some particularly common examples of events not permitted to be inferred from other events:

- Subtypes of Life (e.g. Life.Marry from Life.Divorce)
- Subtypes of Justice (e.g. Justice.Convict from Justice.Pardon)
- Subtypes of Personnel (e.g. Personnel.Start-Position from Personnel.End-Position; Personnel.Nominate from Personnel.Elect)

Future events are not permitted to be inferred from current or past events, relations or states. For example, (Life.Die, Person, Bob Smith, Other) should not be inferred from statements about Bob Smith’s marriage, employment, etc.

5.3 Invalid Inference of Events from States

The distinction between a stative relation and the event that relation is a consequence of can be tricky. For most events, you must rely on your own judgment that an event is explicitly or implicitly described in the text. The following event types require heightened scrutiny: for these, either (a) a valid temporal argument for the event to be inferred must be available or (b) the event must be signaled by textual evidence of the event (and not only the state):

- Life.Marry
- Life.Divorce
- Personnel.Start-Position
- Personnel.End-Position
- Personnel.Nominate
- Personnel.Elect
- Transport.Movement

Examples of blocked events:

- Personnel.Start-Position

- o *ACME spokesman John Smith.*
- o *John Smith works for ACME.*
- Life.Divorce
 - o *Sue and her ex-husband John share custody of their children.*
- Transport.Movement
 - o *John was born in Boston and went to school in California.*

Examples of allowed events:

- Personnel.Start-Position events
 - o *ACME hired John Smith. (explicit textual description)*
 - o *John Smith has worked for ACME since 2005. (DATE)*
 - o *ACME's spokesman since 2005 (DATE)*
- Personnel.End-Position
 - o *Jerry Yang, former CEO of Yahoo*
- Life.Divorce
 - o *Sue, John's ex since 2000.... (DATE)*
 - o *John left his wife Sue. She retained ownership of the house. (this is an example of context being used to interpret what could be seen as ambiguous)*
- Movement.Transport
 - o *Bob went to the airport with no particular destination in mind, and the next day he found himself in Prague. (the event is described in the text itself)*
- Justice-Arrest.Jail
 - o *Bob, an inmate at the county jail... (Justice.Arrest-Jail is not on the list of event types requiring heightened scrutiny. As such, the assessor will assess this in context without heightened scrutiny).*

6 Assessment of Event Type and Argument Role

Systems provide predicate justification in order to prove (a) that an event of a specified type occurs in a document, and (b) that an argument of a specified role occurs in connection to that event type. Predicate justification is comprised of at least one string of text, but may be comprised of multiple strings if multiple strings are needed to prove the occurrence of the specified event type or argument role.

Keep in mind that no direct assessment of the predicate itself is made. Assessment decisions are made only on whether or not the returned predicate strings support the specified event type and argument role.

6.1 Marking Responses 'Ignore'

If the strings of text returned for predicate justification include enough extraneous text such that an unusually high amount of time is required to determine if the text contains

justification for the event type, role and argument, the response should be marked Ignore. For instance, if an entire document was returned as predicate justification, that response would be assessed as 'Ignore'.

NOTE: If a predicate justification is marked 'Ignore', this means the entire response is ignored. Thus, no assessment will be performed on the event type, argument role, canonical argument, or base filler.

6.2 Correct Event Types

In order for event type to be assessed correct, the predicate justification must include enough information to prove that an event of the specified type occurs while not containing too much extraneous text. If only one predicate justification string is provided, in order for event type to be assessed as 'Correct', that one predicate string alone must contain all necessary information.

6.3 Wrong Event Types

Event type is marked wrong if the returned predicate justification does not provide any information necessary to prove that an event of the specified type occurs.

NOTE: If event type is marked wrong, no further assessment is performed on the response.

6.4 Inexact Event Types

Event type is marked inexact if the returned predicate strings contain part, but not all, of the information necessary to prove that an event of the specified type occurs.

Event type is also marked inexact if the returned predicate strings contain all of the information necessary to prove that an event of the specified type occurs but also include an unacceptable amount of extraneous text.

NOTE: Text needed to establish a correct argument role (see below) is not considered extraneous, even if that text is not needed to establish the event type.

6.5 Correct Argument Roles

In order for argument role to be assessed correct, the predicate justification must include enough information to prove that an argument of the specified role occurs while not containing too much extraneous text. If only one predicate justification string is provided, in order for argument role to be assessed as 'Correct', that one predicate string alone must contain all necessary information.

NOTE: In order for argument role to be marked correct the predicate justification must only support the presence of *some* argument of the role specified, not necessarily that the CAS is that argument.

In many instances, concrete justification for an argument role can be provided with two discontinuous predicate strings from across the document. For instance, given the event type `Movement.Transport`, argument role `Vehicle`, and the following text:

```
<post author="HyperGiant" datetime="2010-01-12T11:40:00" id="p1">
I went to Florida last year to visit my sister
</post>

<post author="dell1507" datetime="2010-01-12T11:43:00" id="p2">
how'd you go down?
</post>

<post author="HyperGiant" datetime="2010-01-12T11:53:00" id="p3">
Rented a car
</post>
```

the two predicate strings provided would be the body of the first post and the body of the third post. Together these two strings prove the occurrence of a `Vehicle` role (for a `Movement.Transport` event).

6.6 Wrong Argument Roles

Argument role is marked wrong if the returned predicate justification does not provide any information necessary to prove that an argument of the specified role occurs.

NOTE: If argument role is marked wrong, no further assessment is performed on the response, except assessment of event type.

6.7 Inexact Argument Roles

Argument role is marked inexact if the returned predicate strings contain part, but not all, of the information necessary to prove that an argument of the specified role occurs.

Argument role is also marked inexact if the returned predicate strings contain all of the information necessary to prove that an argument of the specified role occurs but also include an unacceptable amount of extraneous text.

7 Assessment of Base Filler

The base filler is the mention of the argument entity that fills the argument role in connection to the returned event type.

7.1 Correct Base Fillers

Base fillers must meet two requirements in order to be judged as correct. Primarily, all base fillers must meet the requirements of the respective event type and argument role as described in section 4. Secondly, all base fillers must be supported in the provided predicate justification or its surrounding context. If a base filler cannot be justified solely by the returned predicate strings or their context, it should not be labeled as correct, even if you know it to be true because of an outside information source.

Keep in mind that some base fillers are supported through inference, rather than direct, explicit contextual support. As a result it is your job to determine if the provided predicate justification, when viewed as a single whole, reasonably justifies a filler as an event argument. For instance, Time-Args can often be inferred from a document's dateline. Therefore, a predicate justification returned might simply be comprised of two strings, one which was simply the dateline and one which contained evidence of the event. Looking at the context of the second predicate string should allow you to reasonably determine whether and to what extent the dateline can be returned as filling the Time-Arg role. Though in this case there is nothing explicit in the document stating the direct connection between the dateline and the event, we can, as reasonable readers, infer these connections and assess the system responses accordingly.

NOTE: Base fillers can be marked correct even when Event Type and/or Argument Role have been marked inexact. For instance, if the predicate strings contain some, but not all, of the information needed to justify the Event Type, Event Type is marked inexact. However, we look at the immediate context (1-2 sentences in either direction) of the predicate justification when determining the correctness of the base filler, so even in cases where the Event Type is marked inexact, base filler could still be marked correct, assuming that all the needed information existed in the context of the predicate justification.

7.2 Wrong Base Fillers

There are two ways in which base fillers can be simply wrong. Primarily, all base fillers must meet the requirements of the respective event type and argument role as described in section 4. As a result, any base fillers that do not meet the requirements of the respective event type and argument role are wrong. For instance, an aircraft carrier returned as the Place argument of an event would be wrong, because Place arguments can only be GPEs, LOCs, or FACs, not VEHs.

Secondly, all base fillers must be supported in the provided predicate justification strings. If a base filler cannot be justified solely by the predicate strings from which it was selected, it is wrong, even if you know it to be correct because of an outside information source.

7.3 Inexact Base Fillers

A base filler should be judged as inexact if it meets both of the standards for correct fillers (i.e. it is supported in its provided predicate justification and fulfills the requirements of its respective event type/argument role) but the string of text selected is incomplete or includes extraneous text.

8 Assessment of Canonical Argument String

The Canonical Argument String (CAS) is the mention of an argument entity that is the most informative in the document. Though it can be, the CAS is not actually required to be directly involved in the predicate justification as the base filler is.

While the most informative mention of an argument entity is generally the fullest namestring referring to that entity that occurs in a document, some argument entities may only be mentioned in nominal form and in these cases such nominal strings are considered the most informative mentions in the document and are therefore acceptable canonical argument strings. For instance, if a correct base filler returned was “the president” and elsewhere in the document “Barack Obama” occurred, “Barack Obama” would be the CAS (assuming “the president” referred to Barack Obama). In a document that contained “the president” and no other (named) mention of that entity, “the president” would be an acceptable CAS.

It’s important to note that while the CAS is a more informative resolution of the base filler, this does not mean that the base filler and CAS will always be coreferent. Consider the following text:

His resumé listed the FBI and CIA under his employment history.
However, he was fired from the two agencies in 2006, having worked
only a few months at each.

In the above, “the two agencies” is the base filler of a <Personnel.End-Position, Entity-Arg> as that’s the argument entity mention that occurs in connection to the event. However, “the two agencies” can be resolved separately as both “FBI” and “CIA”, creating two separate responses, both of which are correct despite “the two agencies” being equivalent with neither “FBI” nor “CIA”. Cases like this are allowable because even though “the two agencies” and “FBI” are not equivalent, the latter is contained in the former. In general, all cases where the CAS can be reasonably inferred (from the base filler) to be an argument in an event are allowed, even in cases where the CAS and base filler do not refer to the same entity. Systems will sometimes return argument justification strings in order to help show assessors the connection between a base filler and CAS when that relationship is something other than coreference. Systems are not required to return these strings, however, and no direct assessment is made on argument justification.

Note that coordinated phrases such as “Ford and Chrysler” should not be returned as the CAS. In such cases, two separate annotations should returned: one where “Ford” is returned as the CAS and one where “Chrysler” is returned. Note that in such cases it’s fine for the base filler to be the full, coordinated phrase (e.g. “Ford and Chrysler”).

Note that Time arguments are required to be returned in normalized form. While the base filler might be something like “yesterday”, the CAS will be a date in the format yyyy-mm-dd (the date to which “yesterday” resolves). See section 3.5 for a more detailed explanation of date normalization.

8.1 Correct CAS

A CAS must meet three requirements in order to be judged as correct. Primarily, all canonical argument strings must meet the requirements of the respective event type and argument role as described in section 4.

Secondly, all canonical argument strings must be supported in the document as filling the specified argument role for the specified event type. A correct CAS may be supported by the provided predicate justification strings or argument justification strings or in the surrounding context (1-2 sentences in either direction) of either predicate or argument justification. Sometimes, the CAS may not be directly supported by predicate or argument justification, however, but the corresponding base filler is. In these cases, it is your job to determine if the CAS can be considered a correct extension of the base filler that is supported by the returned justification. Cases like this occur when the base filler is not the most informative string in a document, for instance, and the CAS is returned from elsewhere in a document because it is the most informative namestring. If a CAS cannot be justified by the document, the CAS should not be labeled as correct, even if you know it to be true because of an outside information source.

Lastly, the CAS must be the most informative mention of the argument entity in the document. However, this requirement exists only for arguments which have a named mention in the document. If an argument can be resolved to a name, it should be the fullest, most informative name that occurs in the document for that argument. For arguments that only occur as nominal mentions, any nominal mention can be considered correct. Given two nominal mentions, for instance, we will not make determinations about whether one is more informative than the other. Either nominal mention can be considered a correct CAS. Pronouns are not considered informative enough to be considered correct, however, and should be resolved to, at least, a nominal phrase. The only exception to this is the rare case where a pronoun is truly the only mention of an argument entity in the document.

NOTE: The CAS must still be assessed separately even when the base filler has been marked wrong.

8.2 Wrong CAS

There are three ways in which a CAS can be simply wrong. Primarily, all canonical argument strings must meet the requirements of the respective event type and argument role as described in section 4. As a result, any CAS that does not meet the requirements of the respective event type and argument role is wrong.

Secondly, every CAS must be supported by the document, whether in the provided justification strings or their surrounding context, or by being a correct extension of a base filler which is itself adequately supported. If a CAS cannot be justified solely by the document from which it was taken, it is wrong, even if you know it to be correct because of an outside information source.

Lastly, a CAS is marked wrong if it is a nominal mention and was taken from a document that contains a named mention of that same entity, or is a pronoun taken from a document that contains either a named or nominal mention of the entity.

8.3 Inexact CAS

A CAS should be judged as inexact if it is supported in the document and fulfills the

requirements of its respective event type/argument role but the string of text selected is incomplete (i.e. is not the complete namestring or nominal phrase), includes extraneous text, or is not the most informative text string in the document that refers to the filler entity. For arguments that only occur in a document as nominal mentions, any nominal mention can be considered the “most informative”.

NOTE: As mentioned in the previous section, a CAS is marked wrong if it is a nominal mention and was taken from a document that contains a named mention of the same entity. In cases of entities that have named mentions in a document, only names that are not the most informative are considered inexact. “Obama” returned from a document containing “Barack Obama” is inexact, but “the president” returned from a document containing “Barack Obama” is wrong. (“The president” could be marked correct, however, in a document containing only “the president” and no named mentions coreferent with “the president”.)

8.4 Mention Level of Canonical Argument String

In addition to the assessment of the canonical argument string, the mention level of the CAS must also be marked. All canonical argument strings are either named mentions or nominal mentions.

8.4.1 Named Mentions

A named entity mention is a mention that uniquely refers to an entity by its proper name, acronym, nickname, alias, abbreviations, or another alternate name. For our purposes, the extent of a name is the entire string representing the name, excluding the preceding definite article (i.e. “the”) and any other pre-posed or post-posed modifiers. These are excluded because they are not part of the entity’s actual name. For example, Bill Clinton’s name is “Bill Clinton”, not “former president Bill Clinton” (the latter of which would be marked inexact).

8.4.2 Nominal Mentions

A nominal entity mention is an entity mention that does not include the entity’s proper name, but instead refers to the entity by a common noun phrase. For our purposes, the extent of a nominal mention is the full mention of the noun or noun phrase, including articles and all pre-posed and post-posed modifiers.

Both pronouns and times should also be marked as nominal. Note a pronoun will only be a correct CAS if there is a role correctly filled by a pronoun that cannot be resolved to a name or description in the document.

9 Realis Label

All event arguments are given a “realis” label. This label indicates whether the event argument and its related event are actual, generic or something else.

9.1 Actual

Actual will be used when the event actually happened with the returned argument

playing the specified role for the specified event type. For this assessment, “actual” will also include those responses that are reported/attributed to some source (e.g. “Some sources said...”, “Joe claimed that...”), assuming that the event/argument being reported are otherwise actual.

9.2 Generic

Generic will be used for responses which refer to the event/argument in general and not a specific instance (e.g. “Weapon sales to terrorists are a problem”).

NOTE: When an event/argument is both generic and other, it will be marked generic.

9.3 Other

Other will be used for responses in which the event itself and/or the argument did not actually occur. This includes failed events (e.g. “The merger between the two companies has been postponed indefinitely”), denied participation (e.g. “Bob was not John’s killer”), future events (e.g. “She will be nominated next week”), and conditional statements (e.g. “If they find the gun, Smith’s definitely getting indicted”).

10 Creating Equivalence Classes

Throughout the corpus, arguments could be referred to by many different names (e.g. “Hillary Rodham Clinton” might be referred to as “Hillary”, “Hillary Clinton”, “Senator Clinton”, “Secretary of State Clinton”, etc.). As any of these names could have been returned during the first phase of assessment, your job in the second stage is to identify these coreferential arguments and cluster them together into equivalence classes (in the preceding example, all the different names for “Hillary Rodham Clinton” would be grouped together into a single entity equivalence class). This step is necessary because it provides a total number of unique answers. Note that, in order for two arguments to be considered coreferential, they must refer to the same entity; they **cannot** be simply related. Consider the following:

```
"Bob traveled to England last summer. After he arrived in
the UK, Bob..."
```

Given the text, both “England” and “UK” would be valid Destination arguments for the same Movement.Transport event. Since the UK operates as a “country of countries”, which includes England, it is likely that both of these entities are referring to the same Destination of Bob’s Movement.Transport event. However, since the UK and England are not strictly the same entity, the two entities should occupy separate equivalence classes.

Consider the following list of Michael Jackson’s children:

```
Prince Jr.
Prince Michael Jackson, Jr.
Prince Michael "Blanket" Jackson II
```

Paris Katherine Jackson
 Paris Jackson
 "Blanket" Jackson
 Paris
 Prince Michael Jackson II
 Blanket
 Prince

After reading each of the above names in context and determining who was being referred to, you would be able to create three equivalence classes, one for each distinct entity mentioned:

Class 1	Class 2	Class 3
Prince Jr.	Paris Katherine Jackson	Prince Michael "Blanket" Jackson II
Prince Michael Jackson, Jr.	Paris Jackson	"Blanket" Jackson
Prince	Paris	Prince Michael Jackson II
		Blanket

While you should primarily rely on information contained in the documents when creating equivalence classes, you may utilize outside information sources to help make your determinations. For instance, if you found that "Blanket" was a nickname for "Prince Michael Jackson II", then you could cluster "Blanket" and "Prince Michael Jackson II" into the same equivalence class, even if the given source documents did not state the information explicitly. Note, however, that if the information contained in the source documents contradicts outside knowledge, you should cluster arguments based on information in the source documents.

10.1 Equivalence Classes for Job-Titles

Job-Titles present a unique challenge to the process of equivalence class creation because, in addition to determining whether two Job-Titles are considered equivalent, assessors must also ascertain whether two or more equivalent Job-Titles were held in the same organization before grouping them together into a single equivalence class. Primarily, you must adhere to the following rules when determining whether similar Job-Titles are equivalent:

- Exact or nearly-exact string matches are equivalent (e.g. "chief executive" & "chief executive officer")
- Acronyms or common abbreviations should be considered equivalent (e.g. "CEO" & "chief executive officer")
- Common word re-orderings are equivalent (e.g. "Finance Minister" and "Minister of Finance")
- Nearly synonymous terms should be considered equivalent (e.g. "attorney" and "lawyer" as well as "Premier" and "Prime Minister")

- Specified and unspecified positions should **not** be considered equivalent (e.g., “prosecutor”, “attorney”, and “U.S. Attorney” would all go into separate equivalence classes).

Once you’ve determined that a set of Job-Titles is equivalent, you must find out whether they all were held within the same organization before coreferencing them into a single equivalence class. For example, Mitt Romney has held three different “CEO” positions:

CEO, Bain Capital (1984–2002)

CEO, Bain & Company (1991–92)

CEO, 2002 Winter Olympics Organizing Committee (1999–2002)

Even though the three Job-Titles are exactly the same, each of these responses would be placed into separate equivalence classes because the positions were held in distinct organizations.

If you cannot determine the organization in which one or more equivalent Job-Titles were held or there simply is not a coupled organization (as is the case with most occupational references such as “actor”), you should group the unaffiliated responses into a separate equivalence class. For example, if an entity were described as “professor at NYU”, “professor at Berkeley” and simply as “professor”, you would place the three “professor” Job-Titles into three separate equivalence classes – one for the position at NYU, one for the position at Berkeley, and a final one for the unaffiliated position.

10.2 Equivalence Classes for Uninterpretable Answers

Unlike other KBP tasks, in Event Argument Extraction, we perform coreference for all responses, whether they have been marked correct, inexact or wrong. This is possible because coreference decisions are based on the entity or attribute that a string refers to, regardless of the well-formedness of that string. For instance, if “Barack Obama, President of the United States” was returned as a CAS, it would be marked inexact because of extraneous text (assuming it was an otherwise correct answer). We could reasonably coreference this answer with any correct answers referring to Barack Obama, however, because we know that the entity being referred to is the same.

It is also possible, however, that some of the answers returned will be uninterpretable. That is, some answers are not just inexact because of bad form or wrong because they were not actually arguments of the specified role, but are either nonsense answers (e.g. a string of xml code) or refer to things that are not entities or attributes of the types defined in these guidelines. Any answer that cannot be reasonably interpreted as referring to some identifiable entity/attribute can simply be placed in an equivalence class by itself.

10.3 Equivalence Classes for TIME

TIME arguments are handled in a different manner from all other responses. Any response returned as a TIME argument shall be placed in an equivalence class by itself.

Even if a string of text is returned twice from the same exact place in the document, the two instances of that string will be placed in separate equivalence classes if they have been marked as TIME arguments.