Issue spotting in legal cases

Barbara Cuthill and Robert McCartney*
Department of Computer Science and Engineering
University of Connecticut
Storrs, CT 06269-3155
robert@cse.uconn.edu

Abstract

For any system that uses previous experience to solve problems in new situations, it is necessary to identify the features in the situation that should match features in the previous cases through some process of *situation analysis*. In this paper, we examine this problem in the legal domain, where it is known as *issue spotting*; in particular, we present how issues spotting is implemented in CHASER, a legal reasoning system that works in the domain of tort law.

The approach presented here is a compromise between generality and efficiency, and is applicable to a range of problems and domains outside of legal reasoning. In particular, it presents a principled way to use multiple cases for a single problem by exploiting the inherent structure present in many domains.

1 Situation Analysis and the legal domain

In many domains, one problem-solving strategy is to use information from previous experiences, or cases, in addressing a current problem. For this to be effective, it is necessary to be able to find those cases that are useful in a given problem situation, that is, cases that share salient features with the situation at hand. We use the term *situation analysis* to describe the process of determining these salient features in a situation to use in retrieving useful past cases. The results of this analysis provide the indices used to retrieve cases, provide a means to evaluate a retrieved case, and can be used to restrict the cases examined to those likely to be most useful. Furthermore, this analysis can provide a principled way for using multiple cases to solve a single problem by partitioning the useful features into groups that correspond to different parts of the problem.

In the legal domain, situation analysis is a well-known technique, going under the name *issue spotting*. In this paper, we present a model for issue spotting based on jurisprudential work: situation analysis whose structure is imposed by an examination of the domain. Our domain, tort law, is well studied, and the legal literature provides many example analyses for particular situations. Torts include a broad class of harmful actions (excluding breach of contract) for which courts have provided legal redress. The decisions in these cases are based on precedent and commonsense[1] understanding, which illustrating that issue spotting can use both precedent retrieval and commonsense reasoning in determining what is important in a situation.

The approach presented in this paper is used in CHASER [Cuthill, 1992], an implemented system that does issue spotting, finds precedent cases, and constructs arguments in the domain of tort law. In this short paper, we do not present many details of the underlying implementation; this information may be found in [Cuthill and McCartney, 1992], which is an expanded version of this paper, or in [Cuthill, 1992], which describes all of CHASER.

1.1 Issue Spotting

Delaney [1987] provides guidelines for issue spotting in judicial opinions of tort cases: identify the plaintiff's cause of action, including all the facts, legal rules, and use of precedent cases; identify the facts, legal rules,

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[1] In this paper, we use *commonsense* for the adjective, and *common sense* for the noun, as is the practice in the commonsense reasoning community

and precedents raised by any defense raised; and formulate the issues in controversy and how they were decided. The *cause of action* is, in lay terms, the basis of the plaintiff's argument. In a tort case, the plaintiff must prove four conditions: the defendant owed some *duty* to the plaintiff, the defendant *breached* that duty, the plaintiff suffered *harm*, and the harm was *caused* by the breach. A *defense* is the response to a cause of action. This involves either contradicting the facts, assigning a different legal interpretation to the facts, or providing additional facts which weaken the plaintiff's argument. An *issue* is a specific point on which the two sides differ; the court's resulting decision on an issue is its *holding*.

Issue spotting in a situation, as opposed to issue spotting in an opinion of a decided case, is a less constrained problem: when faced with a situation, we would like to identify *possible* causes of action and *possible* defenses for each; there will be an issue raised by each of these defenses.

[Gibbons, 1990] provides a detailed example of how a lawyer might identify the legal issues in a situation: a mother who has come to a lawyer because her 8-year-old son Jeffrey was run over and killed by a stolen car. Given the harm to the son, the lawyer considers possible defendants based on how directly they caused the harm: the driver of the car, the mother (who let Jeffrey play alone outside), Timothy Newland, the previous driver of the car (whose carelessness led to the theft), and John Newland, the owner of the car (who let his careless son borrow it). The case against the thief is strong, but he has not been caught (and likely will not be worth suing if he is found, due to lack of money). The mother is an unlikely defendant given that she is hiring the attorney, and the case against her is weaker since she can raise two defenses: parental immunity, and the driver's negligence, an "independent cause." These defenses raise two issues: does the doctrine of parental immunity exist in this jurisdiction and was the driver's action foreseeable. In Gibbons' example, the case against Timothy Newland is not worth pursuing because he is an 18 year old without resources. John Newland has financial resources, but the case against him is the most difficult to prove because he can claim that his son's carelessness and the thief's action were both "intervening causes" of the harm. These defenses raise the issues of foreseeability of Timothy's carelessness and the thief's action. This analysis illustrates how a lawyer might examine a new situation by deriving the arguments each side can make and determining if a case is worth pursuing.

1.2 Overview of CHASER

The CHASER system performs situation analysis, finds appropriate precedent cases, and generates arguments in the domain of tort law. It concentrates on two tasks: *situation analysis*, which takes a fact situation as input and proposes potential lawsuits, identifying the issues that must be addressed in each suit, and *precedent finding*, which takes a potential lawsuit with identified issues as input and retrieves the relevant precedent cases for each of the issues. The results from these two tasks are combined into arguments with precedents for the tort actions that are supported by the facts. Situation analysis provides guidance for finding precedents, since the potential issues identified provide a way to index into the database of legal cases, and provides the structure for the arguments to be presented for each potential lawsuit.

In this paper, we focus on the situation analysis component of CHASER. In the following sections, we discuss the knowledge required to perform this analysis, the process by which the analysis is performed, and relate this approach to those used by other researchers. This discussion is largely intuitive, focusing on what kinds of knowledge and processes are used, rather than on the details of how these are reflected in the implementation. For more detail, see [Cuthill and McCartney, 1992] or [Cuthill, 1992].

2 Knowledge Requirements

The process of issue spotting in CHASER is knowledge-intensive, both in the range and detail of information needed. Due to the domain, it is necessary to represent and use specific factual knowledge about the world, domain knowledge about tort law, commonsense knowledge about the definition of terms, causation, and human behavior, and knowledge of specific tort cases decided by the courts. While the *implementation* of a knowledge representation scheme for this problem is open for argument, the need for these kinds of information is not.

Issue spotting is performed on specific fact situations. Because the fact situations are relatively unrestricted, the representation must be general enough to represent a wide range of concepts. Specifically, it must support multiple actors and events, temporal and spatial relations, causation, and individual agents' beliefs that change over time.

Analyzing tort situations requires a knowledge of tort law: the legal constructs appropriate for tort law, the principles those constructs represent, the organization of the legal principles, and how those principles should be applied. These legal constructs organize the

facts of a case, and are the duties, causes of action, defenses, issues and holdings. Chaser employs an organizational framework for the legal constructs and principles derived from the legal literature, e.g. [Prosser, 1971, Prosser *et al.*, 1988]. Using the actual constructs of the domain is the best way to organize case information [Hafner, 1990, McCarty, 1990], particularly when these constructs have been codified and are accepted by the domain experts. Gardner made a similar use of accepted legal constructs in the area of contract law [Gardner, 1987]; she offers more extensive justification (See Section 5).

More than most legal domains, tort law relies to a large extent on commonsense reasoning; key aspects, such as harm, causation, and reasonable behavior, are *not* defined by statute. Tort decisions are determined by such points as how often a restaurant should clean up spills, or whether exposure to a carcinogen constitutes harm to the one exposed. Any system in this domain must have some representation for commonsense knowledge.

Tort law is a common law domain, where decisions are bound by the rule of *stare decisis*: each decision must be arguably consistent with the court's past results, but not necessarily with its interpretation of the facts. Even though the court is not bound to agree with arguments and interpretations, the argument used in a previous case can provide an example of a successful argument that may be useful. For a representation of a tort case to be useful both as a precedent case and a source for supporting interpretations, it must include knowledge of the fact situation that gave rise to it, the legal arguments and issues involved, the resulting decisions of the court, and the reason each specific legal principle was applied to the case.

2.1 KR in CHASER

CHASER represents each of these types of knowledge: specific situation facts, domain knowledge, common sense, and past cases.

CHASER needs a representation to describe "what happened" in a situation that might have legal significance. Among these things are individual actors, groups of actors acting together, the relationships among the actors, objects and property belonging to or in the control of an actor, states and state-changes of objects and actors, actions and events, the knowledge of actors, the temporal relationships among actions, states, and state-changes, and the causal relationships among actions, states, and state-changes. CHASER represents facts in a predicate calculus notation similar to LLD [McCarty, 1989]. Like LLD, we reify (treat as entities) events and relationships to facilitate reasoning about important concepts. We use a *slot-assertional* notation with predicates like those in a case grammar [Charniak and McDermott, 1985]. As an example, the information that John owns a grey car might be represented as in Figure 1. As our domain is largely concerned with state changes, these are also reified, and we allow for causation of state changes by events through using the *direct-cause* and *enable* relations (Figure 2). The representation used is not particularly terse, but it is expressive and easy to understand.

The legal constructs of tort law are represented as frames. Specifically, we have frames for causes of action, duties, defenses, issues, and holdings. Each of these is a general template with type constraints on the slots, and can be instantiated for a particular fact situation by using instantiation knowledge embodied in a rule-based system. The general legal constructs (uninstantiated frames) are organized in a taxonomic structure similar to the organization in [Hafner, 1987], corresponding to accepted jurisprudential classification. The hierarchical organization of these frames is reflected in the implementation, which allows us to easily relate corresponding frames by their common taxonomic ancestry. This provides the basic information used in precedent retrieval, as the same hierarchies are used to organize past cases.

Commonsense reasoning is a difficult problem, particularly in a domain where common sense is such a central feature. In our implementation, we approximate this by rules, and restrict our range to problems of determining whether harm occurred, inferring missing information (for example, a product typically has a manufacturer, even if not mentioned in the fact situation) and causation. Because proving a defendant's actions dirtectly or indirectly caused harm is essential to proving liability, causation is particularly important in this domain. Causal rules are used to connect the harm to the defendant's actions. Using the representation of the gun shooting in Figure 2, we would say that Frankie caused the death, since she was the agent of a direct cause of the death, and also that Oliver caused the death, since he was the agent of an action that enabled the direct cause of the death. More examples of causation and the chains of reasoning are given in Section 4. This is at best a partial solution to the problem, but provides at least some of the desired system behavior. Further examination of what sort of commonsense reasoning is required in this domain may shed some light on commonsense causal reasoning in general, but that is outside the scope of this research.

Past cases are stored as collections of instantiated frames representing the legal constructs used in the argument and resolution of the cases; these cases are organized in part by the taxonomic hierarchies of legal

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(inst ownership1 ownership)          ; there is an owning
(agent ownership1 John)              ; John is the agent of that owning
(object ownership1 car2)             ; car2 is the object of that owning
(inst car2 automobile)               ; car2 is an automobile
(color car2 grey)                    ; car2 is colored grey
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Figure 1: "John owns a grey car."

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(inst death1 state-change)           ; there is a state-change
(patient death1 Johnny)              ; Johnny experienced that change
(inst gunshot1 gun-shooting)         ; there is a gun shooting
(agent gunshot1 Frankie)             ; Frankie shot the gun
(inst sell43 selling)                ; there is a sale
(agent sell43 Oliver)                ; Oliver did the selling
(patient sell43 gun2)                ; gun2 was the object sold
(destination sell43 Frankie)         ; Frankie did the buying
(direct-cause gunshot1 death1)       ; the shooting was a direct cause of the death
(enable sell43 gunshot1)             ; the sale enabled the shooting to occur
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Figure 2: A partial description of a shooting.

principles. This organization means that we can access any cases that include a particular legal structure, and can traverse the collection of cases by traversing the associated taxonomies, a traversal that allows us to find cases related on any of the defined structures. Each represented case includes a large number of facts (case representations range from 10K to 30K bytes), and we allow indexing on the basis of facts as well as the legal structures. The current implementation includes a case base of thirty-five representations of actual legal cases.

3 Situation Analysis

CHASER's situation analyzer accepts descriptions of new situations plus constraints on plaintiffs and defendants, and returns the legal arguments each potential plaintiff and defendant can make with the resulting legal issues. It attempts to identify all possible action-defense-issue combinations that the situation supports (subject to plaintiff and defendant constraints) in an incremental fashion from the strongest to weakest case (from the plaintiff's perspective).

3.1 The plaintiff's story: the cause of action

CHASER begins analyzing a situation by finding the potential plaintiffs—those who were harmed. The purpose of tort law is to redress the harm caused by a failure to fulfill a legal duty. Harm is a commonsense concept here having to do with a change to a person or his/her property.

The persons and actions (or inactions) that caused the harm are the potential defendants and duty-breaching actions. Like harm, these are also commonsense concepts. The order in which actors and actions are considered is based on proximity—actors that *directly* cause harm are considered before those whose actions are more indirect causes, as the more direct causes make a stronger case.

The duty breached is determined from the relationship of the plaintiff and defendant and the potentially breaching act. CHASER determines the potential plaintiff's duty by examining past cases for a situation in which the plaintiff and defendant had this relationship and a similar event was considered a breach of that duty or, if none is found, by applying legal rules based on the relationship of the plaintiff and defendant. Determining the duty in this fashion is appropriate because the origin of most duties is in case law. A more aggressive strategy might be to argue for expanding duties beyond existing cases, but that is beyond CHASER's capabilities.

Once CHASER has developed a cause of action, it is categorized (using rules) by type based on the harm, duty, and breach. For example, if the harm is death, the type is *wrongful death*, if the duty allegedly breached is that to drive reasonably, the type is *neg-*

ligent driving. These categories are used to focus the search for precedent cases. A cause of action may be an example of several different types.

3.2 The defense responds

For each cause of action, CHASER generates possible defenses. Each defense challenges one or more elements of the cause of action based on either successful defenses used in previous cases, lack of support for the plaintiff's interpretations in previous cases, or disagreement about the facts of the situation.

Each element of the cause of action is checked separately. CHASER checks the duty by looking for any past cases which challenged the existence of that duty in general, challenged the existence of that duty for the same relationship, or challenged whether this duty-justifying relationship held between a plaintiff and defendant. In a similar fashion, CHASER also looks for cases that challenge whether the actions breach the duty, whether the action actually caused the harm, or whether there was any harm that warrants redress. Causation is relative here; the defense can argue that an action is too indirect a cause, that some other agent's action that was a more direct cause, or that it was unreasonable to foresee that the action would have the harmful effect.

As well as using positive examples of a defense, cases can also be used in a negative sense; if there are no past cases which claim this harm is a breach of this type of duty, that provides an argument. Other defenses can be generated by disagreement about facts or events that support elements in the cause of action, leading to a challenge of the supported element.

3.3 Isolating the Issues

Once the causes of action and defenses have been determined, the issues can be identified. The type of issue that arises depends on what type of defense has been used to challenge what type of cause of action. For example, if a defendant was accused of not using reasonable care in allowing his car to be stolen, a cause of action for negligence is generated. However, the defendant may use the proximate-cause defense that someone else's actions were responsible for the injury. This combination of a *negligence* cause of action and a *proximate-cause* defense raises the issue of whether the thief's action was *foreseeable.*

The interpretation each side has put on the facts is based on a characterization of the facts and events. These characterizations weaken the other side's argument. The resulting legal issues come from differences in characterization; these are the problems that must be resolved by the court.

4 An Example

To illustrate the algorithm used in the situation analyzer, CHASER's analysis of Gibbons' example situation is described in the following section. The input is the facts of the situation in a formal representation language. Given the story with no constraints, CHASER first checks who was harmed and finds Jeffrey Stapleton, whose harm matches the commonsense notion of death as a harm. The cause of the death is explicitly given as being hit by the car. Because the driver is responsible for what the car does (by commonsense), he is the obvious defendant, with the car hitting Jeffrey the proposed breach action. The relationship between a driver and a member of the public, coupled with the action of striking someone with a car, allows us to invoke a prior case involving a driver hitting a pedestrian with a car. This case used the duty "to drive as a reasonable and prudent person;" and so it is used for this situation as well. There are two derivations for the proposed action against the driver—wrongful death and negligent driving. The cause of action and duty frames are given in Figure 3. In this and subsequent figures we use $\rightarrow$ to denote *causes*, and $\rightarrow_E$ to denote *enables.*

If the user is uninterested in the thief, since he is an unknown person, and probably poor, CHASER continues its examination of the events that led up to the harm. Two commonsense notions of causality apply here: if an unsupervised minor is injured, the lack of supervision may be a cause, and if a driver abandons his keys, the availability of the keys may be a cause of the theft of the car. The duty Jeffrey's mother owes him is that she will behave as a "reasonable and prudent parent" and harm to an unsupervised child has been considered a violation of this duty in a past case. The duty Timothy owes Jeffrey is that Timothy will behave as a "reasonable and prudent person" and allowing a car to be stolen by making the keys generally accessible has been held to violate that duty. The causes of action against Margaret Stapleton (Jeffrey's mother) and Timothy Newland are given in Figure 4.

To find out how Margaret and Timothy can respond, CHASER applies defense instantiation rules to the causes of action and the facts of the situation. CHASER finds that Margaret can argue that the doctrine of parental immunity applies and that her action is not the proximate cause of Jeffrey's death. Timothy can also argue that his action is not the proximate cause of death. These defenses raise the issues of whether the doctrine of parental-immunity exists

cause-of-action: Jeffrey Stapleton (p) vs. Driver-of-car (d)
harm: Death of Jeffrey Stapleton
breach action: Car hits Jeffrey
relationship/duty: driver-public / reasonable-driver
causation: (Driver directs car $\rightarrow$ car hits Jeffrey)
derivation: (Driver negligence, wrongful death)

Figure 3: Cause of action and duty for driver of car

cause-of-action: Jeffrey Stapleton (p) vs. Margaret Stapleton (d)
harm: Death of Jeffrey
breach action: Car hits Jeffrey
relationship/duty: parent-child / reasonable-and-prudent
causation: (Margaret doesn't supervise Jeffrey $\rightarrow_E$ car hits Jeffrey)
derivation: (Negligent supervision, wrongful death)

cause-of-action: Jeffrey Stapleton(p) vs. Timothy Newland (d)
harm: Death of Jeffrey
breach action: Car hits Jeffrey
relationship/duty: public-public / reasonable-and-prudent
causation: (Timothy drops keys $\rightarrow_E$ car is stolen $\rightarrow_E$ car hits Jeffrey)
derivation: (Negligence, wrongful death)

Figure 4: Cause of action and duties for Margaret Stapleton and Timothy Newland

in this jurisdiction and whether the thief's action was foreseeable. Figure 5 shows these defenses and the issues they raised.

If Margaret and Timothy are not acceptable defendants, CHASER analyzes the events further and finds that John Newland enabled his son to drop the keys by giving him permission to borrow his car. John's duty, like Timothy's, is to behave as a "reasonable and prudent person" would. The cause of action against John is given in Figure 6.

The system finds three defenses that John can make. He can argue that two other actors, Timothy and the thief, both are more directly responsible for the accident than he is. He can also argue that there are no past cases (at least in this case base) in which lending a car is considered a breach of the duty of reasonable care. These defenses are given in Figure 7.

CHASER successfully processes Gibbons' example fact situation to arrive at the same set of possible defendants. CHASER generates the defenses these defendants can raise from the information available in the case base and the legal instantiation rules. Each cause of action and defense results in an issue that the court must resolve in deciding the case. CHASER does not choose among defendants, a consideration that entails such factors as available resources and differing likelihoods of success, leaving that choice to the user.

5 Related Work

This work shares a number of features with Gardner's [Gardner, 1987]. Her domain is a common law domain (contracts), her domain structure is based on an authoritative legal source [American Law Institute, 1981], and she performs issue-spotting from fact situations. Issue-spotting in Gardner's system involves the use of an ATN; the information in a situation and the domain rules enable the transitions. When there is no applicable legal rule to support some predicate ("When the rules run out"), commonsense rules and "examples" (which can be viewed as simplified prototypes, developed from a number of cases) that support or deny that predicate are retrieved. If not all of the commonsense rules and examples agree vis-a-vis that predicate, then that predicate is recognized as raising an issue. Issues, therefore, can be raised by particular predicates from the domain theory (those that cannot be resolved by legal rules alone). There is also the possibility of generating issues based on conflicting legal rules, possible due to inconsistencies in the underlying domain theory.

defense to: breach of Jeffrey Stapleton v. Margaret Stapleton
derivation: parental immunity
precedent: *Anderson v. Stream*
issue: existence of this privilege in this jurisdiction

defense to: causation of Jeffrey Stapleton v. Margaret Stapleton
derivation: independent cause (Driver directs car $\rightarrow$ car hits jeffrey)
reason: commonsense
issue: foreseeability

defense to: causation of Jeffrey Stapleton v. Timothy Newland
derivation: independent cause (Driver directs car $\rightarrow$ car hits Jeffrey)
reason: commonsense
issue: foreseeability

Figure 5: Defenses and Issues for Margaret Stapleton and Timothy Newland

cause-of-action: Jeffrey Stapleton (p) vs. John Newland (d)
harm: Death of Jeffrey
breach action: Car hits Jeffrey
relationship/duty: public-public / reasonable-and-prudent
causation: (John loans car to Timothy $\rightarrow_E$ Timothy drops keys $\rightarrow_E$ car is stolen $\rightarrow_E$ car hits Jeffrey)
derivation: (Negligence, wrongful death)

Figure 6: Cause of action and duties for John Newland

defense to: breach of Jeffrey Stapleton v. John Newland
derivation: no breach exists
precedent: lack of precedent
issue: was this a reasonable and prudent act

defense to: causation of Jeffrey v. J. Newland
derivation: independent cause (Driver directs car $\rightarrow$ car hits jeffrey)
reason: commonsense
issue: foreseeability

defense to: causation of Jeffrey Stapleton v. John Newland
derivation: independent cause (Timothy drops keys $\rightarrow$ car is stolen $\rightarrow_E$ car hits Jeffrey)
reason: commonsense
issue: foreseeability

Figure 7: Defenses and Issues for John Newland

The primary difference between this approach and the one used in CHASER is that CHASER finds issues based on particular precedents as well as by common sense—for example, if an issue was raised before by a successful defense, it will be found as an issue even if it was a non-typical result. Gardner stated that a "fully developed legal reasoning program" would include precedent cases as well as examples, but her system did not employ them. Additionally, issues are spotted in CHASER in a more "adversarial" fashion. Rather than looking for potential disagreement on a predicate that cannot be resolved by the legal rules, CHASER generates defenses by attempting to challenge part of the plaintiff's case, with the domain structure suggesting where such challenges might be made. Both systems employ commonsense reasoning, but the requirements of their domains differ:for example, CHASER reflects the fact that tort law has a stronger basis in certain kinds of commonsense reasoning, particularly regarding causality, while Gardner's program addressed the problem of representing speech acts, an important aspect of contracts problems. Neither system concentrates on the fundamental problems of commonsense reasoning, but both illustrate the necessity of its use.

Using whole or partial cases

The selection of past experiences for use in a case-based reasoning approach can be based on a comparison of the past experiences to the entire case or to any portion of the case. HYPO [Ashley, 1991], which operates in the domain of trade secret law, compares the entire new case to entire past cases to determine which is the closest case. It uses a feature-based representation of the case and partitions the case-base into a claim lattice, sorting the cases according to the features they share with each other and subsequent fact situations. While sound jurisprudentially, it means that intermediate or partial interpretations in cases are unavailable for later use, particularly if part of the case matches the situation, but other parts do not. It has the advantage of relating a situation in a principled way to all of its related cases

At the opposite extreme, allowing cases to be compared to any portion of the new case, is GREBE, [Branting, 1991] which operates in the domain of worker's compensation. GREBE considers parts of cases, termed *precedent constituents*, which can be any subset of the facts in a case that were "sufficient to justify" a legal predicate in the judicial opinion. These constituents can later be used for parts of a given situation—the matching is between parts of the fact situation and the antecedents in the precedent constituents—and then support the set interpretations corresponding to the constituent predicates. The advantage is that a set of partial matches may lead to a stronger explanation if the individual components are close matches, when no individual case matches all of the facts well. The disadvantages are that partitioning the fact situations into parts to match is computationally expensive, and the set of partial precedents does not supply the strong precedent that the "whole case" approach does.

CHASER (as well as Gardner's program) is a compromise between the two approaches. CHASER can compare the new situation to portions of past cases. This allows CHASER more flexibility in selecting useful cases for analyzing part of the case. However, CHASER limits the portions of cases compared to those organized by domain structures such as the cause of action or duty associated with a case. This limitation prevents the unconstrained search of the case-base while maintaining the deep structure of the case associated with the domain. While this approach does not eliminate the partitioning problems, the limits placed on what the partitions can be used for should greatly reduce them.

6 Conclusions

To summarize, the CHASER situation analyzer accepts descriptions of new situations in predicate calculus form and finds the arguments potential plaintiffs and defendants can make and the issues that result from those arguments. The arguments and corresponding issues provide the structure that allows the use of information from precedent cases. It performs issue-spotting in a manner consistent with known methods of legal issue spotting by comparing the case to past cases and by applying knowledge of how legal principles are defined. These definitions take the form of types of situations described in the accepted definition and described in past cases in which judges decided that the definition applied.

An important benefit of this approach is that it provides a principled way to use multiple cases for a single problem, but avoids much of the potential complexity. The approach addresses the precedent constituent problem by imposing structure based on the regularity of the domain; it offers a promising approach, especially in domains where such structure has already been identified and studied.

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