Pilot Case

Ordinary Premises

1. Alfabank is established in Italy.
2. Alfabank makes a payment to Mr. Brown who is resident in an other Member State.
3. Alfabank has a debt producing interests.
4. Mr. Brown is a beneficial owner.
5. Mr. Brown is an individual
6. Mr. Brown receives, as final recipient, an interest payment coming from government securities
7. The payment concerns interests related to the credit of Mr. Brown.
8. The credit of Mr. Brown comes from government securities.

Assumption

9. Alfabank is a paying agent

Conclusions:

- A communication of the interest payment shall be made.

Argument Graph Representation

The pilot case presented above has been represented in XML and then imported in Carneades in order to produce an argument graph diagram.

Premises and assumptions have been represented as statement in a tag with this structure:
`<s id="..." summary="...">`
Where *id* is used as simple reference for the statement; and *summary* is the content of the statement.

Arguments have been represented with a argument tag which has

- two attributes: *id*, for the identification of the argument, and *direction* which says whether the argument is a pro argument or a con argument.
- a children element for each assumption, premise and for the conclusion. Each of them has a reference to the statement through the attribute *statement*.

For example, the text below means that a1 is a pro argument composed of two premises, one assumption and a conclusion.

```
<argument id="a1" direction="pro">
        <premise statement="establishment" />
        <premise statement="residence" />
        <assumption statement="paying-agent" />
        <conclusion statement="communication" />
</argument>
```

If we look at the content of the statements specified in this argument:

<s id="**establishment**" summary="**Alfabank is established in Italy.**" />
<s id="**residence**" summary ="**Alfabank makes a payment to Mr. Brown who is resident in an other member State.**" />
s id="**paying-agent**" summary ="**Alfabank is a paying agent.**" />
<s id="**communication**" summary ="**A communication of the interest payment shall be made.**" />

Then we can say that a communication of the interest payment shall be made since Alfabank is established in Italy, Alfabank makes a payment to Mr. Brown who is resident in an other member State with the assumption that Alfabank is a paying agent.

The complete XML code is the following:

```
<?xml version="1.0" encoding="UTF-8" ?>
<?oxygen RNGSchema="LKIF.rnc" type="compact"?>
- <lkif>
    <s id="establishment" summary="Alfabank is established in Italy." />
    <s id="residence" summary ="Alfabank makes a payment to Mr. Brown who is resident in an other member State." />
    <s id="debt-interests" summary ="Alfabank has a debt producing interests." />
    <s id="beneficial-owner" summary ="Mr. Brown is a beneficial owner." />
    <s id="individual" summary ="Mr. Brown is an individual" />
    <s id="receives" summary ="Mr. Brown receives, as final recipient, an interest payment coming from government securities" />
    <s id="payment-interests" summary ="The payment concerns interests related to the credit of Mr. Brown." />
    <s id="government-securities" summary ="The credit of Mr. Brown comes from government securities." />
    <s id="paying-agent" summary ="Alfabank is a paying agent." />
    <s id="communication" summary ="A communication of the interest payment shall be made." />

  - <argument-graph>
    - <argument id="a1" direction="pro">
          <premise statement="establishment" />
          <premise statement="residence" />
          <assumption statement="paying-agent" />
          <conclusion statement="communication" />
      </argument>
    - <argument id="a2" direction="pro">
          <premise statement="residence" />
          <premise statement="payment-interests" />
          <conclusion statement="paying-agent" />
      </argument>

    - <argument id="a3" direction="pro">
          <premise statement="government-securities" />
          <conclusion statement="payment-interests" />
      </argument>

    - <argument id="a4" direction="pro">
          <premise statement="debt-interests" />
          <premise statement="beneficial-owner" />
          <conclusion statement="residence" />
      </argument>
```

```
    - <argument id="a5" direction="pro">
            <premise statement="individual" />
            <premise statement="receives" />
            <conclusion statement="beneficial-owner" />
        </argument>
  </argument-graph>
  </lkif>
```

This XML code can be imported in Carneades with this code

```
(module italian_pilot mzscheme

  (require (prefix lkif: "../Carneades/src/lkif.scm"))
  (require "../Carneades/src/statement.scm")
  (require "../Carneades/src/argument.scm")
  (require "../Carneades/src/argument-diagram.scm")
  (require (prefix list: (lib "list.ss" "srfi" "1")))

  (define imports (lkif:import "pilota.xml"))
  (define texts (index-by-statement (list:filter text? imports)))

  (define ag1 (car (list:filter argument-graph? imports)))

  (define c1 (accept default-context 'individual))
 ; (define c2 (reject c1 'email))

  (define (show ag context)
    (view* ag
           context
           (lambda (x) x)
           (lambda (s)
             (let ((txt (hash-table-get texts s (lambda (x) #f))))
               (if (and txt (not (equal? (text-summary txt) "")))
                   (text-summary txt)
                   s)))))

  (show ag1 c1)
 ; (show ag1 c2)
  ) ; module end
```

This will produce the argument diagrams showed in Fig. 1 or Fig. 2 according if we choose to display, respectively, the id or the summary of statements.:

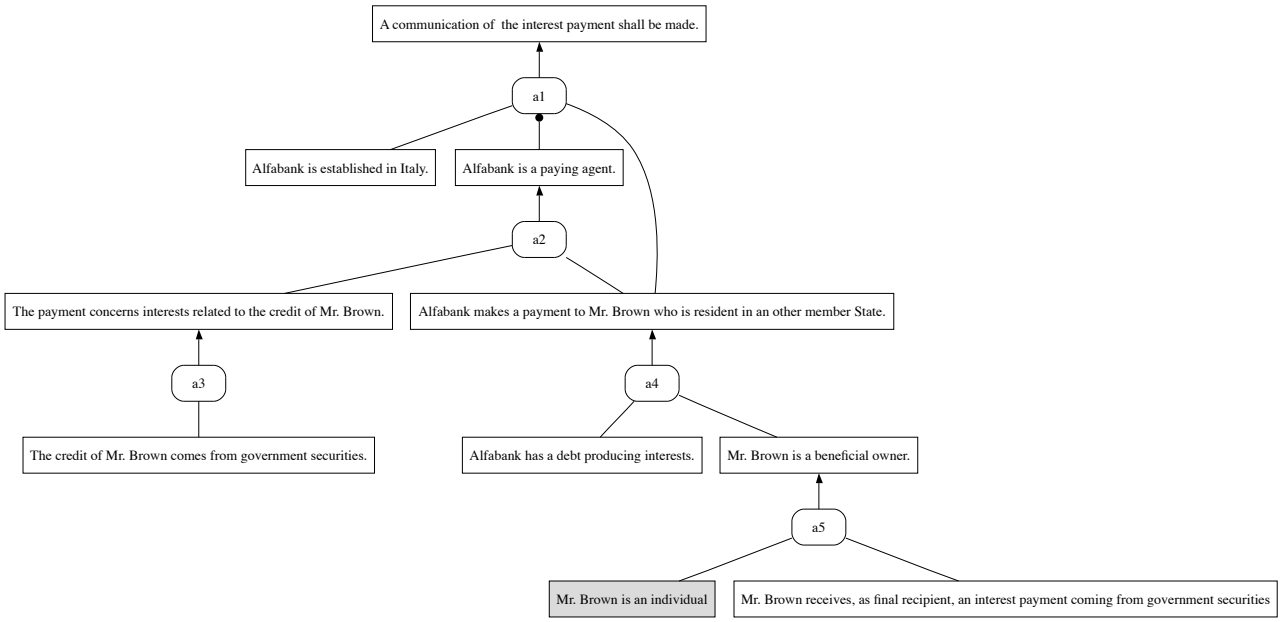

Figura 1 - Argument Graph Diagram using ID

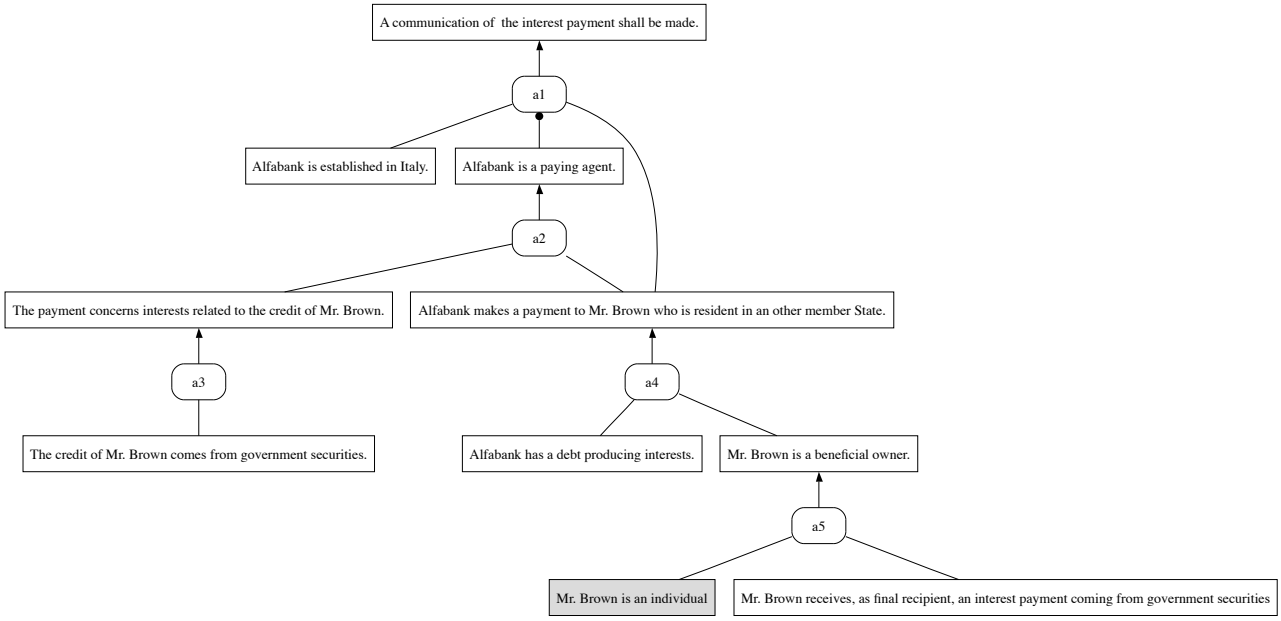

Figura 2 - Argument Graph Diagram using summary