Base Language - Bug #2154

Date arithmetics and Gregorian gap

05/24/2013 02:39 PM - Ovidiu Maxiniuc

Status:	New	**Start date:**	05/24/2013
Priority:	Normal	**Due date:**	
Assignee:		**% Done:**	0%
Category:		**Estimated time:**	0.00 hour
Target version:			
billable:	No	**case_num:**	
vendor_id:	GCD	**version:**	

Description

Related issues:

Related to Base Language - Feature #1584: add conversion and runtime support ...	**Closed**	**12/17/2012**	**05/10/2013**

History

#1 - 05/24/2013 02:43 PM - Ovidiu Maxiniuc

While implementing add-interval / interval functions for date/datetime/datetim-tz I encountered some particular cases of date/datetime arithmetic, namely the "Gregorian gap".

It looks like Progress has some small bugs here, which will probably need to be duplicated.
Here are some examples:

```
add-interval(10/04/1582, +1, "month") EQ 11/14/1582 /* I was expecting 11/04/1582 here */
```

but in reverse:

```
add-interval(11/14/1582, -1, "month") EQ 10/24/1582 /* I was expecting to get the initial 10/04/1582 */
```

On the other hand,

```
add-interval(10/15/1582, -1, "month") EQ 09/15/1582 /* this looks normally */
```

but the reverse is:

```
add-interval(09/15/1582, +1, "month") EQ 10/25/1582 /* not the initial 10/15/1582 */
```

At this moment I cannot figure exactly how Progress handles this arithmetic as the size of months differs:

```
MESSAGE INTERVAL(ADD-INTERVAL(10/15/1582, -1, "month"), 10/15/1582, "days"). /* = -20 */
MESSAGE INTERVAL(ADD-INTERVAL(09/15/1582, +1, "month"), 09/15/1582, "days"). /* = 30 */
```

For the moment, I suspended the work on this, as probably this year will not be very used in today's applications.