Subject: Re: Problem in converting birth date CMC from Afghan calendar to Gregorian calendar
Posted by Trevor-DHS on Fri, 24 Feb 2017 06:42:42 GMT
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Hi Jing,

Below is the conversion function used in CSPro:

```
 { Convert Persian calendar to Gregorian }
 function dconvert(p_day,p_month,p_year);  { Assume for all years that the vernal equinox is at March 21st }
   xtemp = 1;
   if validyr(p_year) & p_month in 1:12 then

     g_year = p_year + 621;                                  { 1;Hammal - 31 days (March-April)
             }
     if !(p_day in 1:31) then                               { 2;Saur - 31 days (April-May)
       }
      p_day = 15;                                           { 3;Jauza - 31 days (May-June)
     }
     endif;                                                 { 4;Saratan - 31 days (June-July)
}
     { number of days since start Persian year }            { 5;Asad - 31 days (July-August)                }
     box p_month => days;                                   { 6;Sonbola - 31 days (August-September)        }
          1-6   => (p_month-1) * 31 + p_day;                { 7;Mizan - 30 days (September - October)       }
               => 186 + (p_month-7) * 30 + p_day;           { 8;Aqrab - 30 days (October-November)          }
     endbox;                                                { 9;Qaus - 30 days (Novemebr - December)        }
     { Days between vernal equinox and Jan. 1st }           { 10;Jadi - 30 days (December - January)        }
     equinox = 80;                                          { 11;Dalw - 30 days (January-February)
         }
     { number of days Gregorian is under way }              { 12;Hut - 29/30 days (February-March)          }
     tdays = equinox + days;
     leapyear = (g_year%4 = 0);
     if !leapyear then
       if tdays > 365 then
         tdays = tdays - 365;
         g_year = g_year + 1;
       endif;
     else
       if tdays > 366 then
         tdays = tdays - 366;
```

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    g_year = g_year + 1;
   endif;
  endif;
  if leapyear & tdays >= 60 then tdays = tdays - 1 endif;

  { Determine Gregorian month }
  box tdays => g_month;
    <=  31 =>  1;
    <=  59 =>  2;
    <=  90 =>  3;
    <= 120 =>  4;
    <= 151 =>  5;
    <= 181 =>  6;
    <= 212 =>  7;
    <= 243 =>  8;
    <= 273 =>  9;
    <= 304 => 10;
    <= 334 => 11;
          => 12;
  endbox;

  { And the day in the month }
  box         tdays => g_day;
    <= 31 => tdays;
   <=  59 => tdays - 31;
   <=  90 => tdays - 59;
   <= 120 => tdays - 90;
   <= 151 => tdays - 120;
   <= 181 => tdays - 151;
   <= 212 => tdays - 181;
   <= 243 => tdays - 212;
   <= 273 => tdays - 243;
   <= 304 => tdays - 273;
   <= 334 => tdays - 304;
         => tdays - 334;
  endbox;
 else
  g_day = p_day;               { Cannot determine }
  if validyr(p_year) then
   g_year  = p_year + 621;     { most likely; first 9 months }
   g_month = p_month;          { DK/missing }
  else
   if p_month in 1:12 then
    g_year = p_year;          { DK/missing }
    box p_month => g_month;
          1-9  => p_month + 3;  { most likely; 21 days out 31 }
              => p_month - 9;
    endbox;
```

```
      else
        g_year  = p_year;    { DK/missing }
        g_month = p_month;   { DK/missing }
      endif;
    endif;
  endif;
  if g_year = 2011 then
    g_year = 2010;
    g_month = 12;
  endif;

  dconvert = xtemp;
  {errmsg("In:%d-%d-%d and out: %d-%d-%d",p_day,p_month,p_year,g_day,g_month,g_year); }
end;
```