1 AIX-adjustements of the LINKAGE package

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In order to run the LINKAGE software on an IBM-RS/6000-workstation (AIX 3.2.3 operating system) several changes in the below listed program sources have been made. I started with LINKAGE 5.2 as distributed from the Columbia FTP site (york.ccc.columbia.edu).

1.1 Global changes

1.1.1 Makefiles

In every Makefile the commands to invoke the compilers have set to **xlp** and **xlc**, respectively. The xlp pascal compiler option **-L** has been discarded. Source file names with the extension *.p have been altered to *.pas.

1.1.2 Pascal source files

The command statements

reset(*,'*')

and

rewrite(*,'*')

have been completed to

reset(*,'NAME=*')

and

rewrite(*,'NAME=*') ,

respectively.
Scripts generated by LCP check the return code after the execution of a pascal program. Because of that in every pascal source the command statement

RETCODE(0);

has been inserted directly in front of the terminating END statement with the aim to assure a proper execution of the LCP scripts.

1.1.3 C source files

Every occurence of one of the following statements has been put into comment signs (/* */) for neutralizing, since they are superflous for this compiler:

extern int fscanf();
extern int fprintf();
extern int printf();
extern int sscanf();

extern int sprintf();

1.2 Local changes

1.2.1 /exc/src directory

The VARIABLE **continue** has been renamed to **ccontinue** in xlodscore.pas, xilink.pas and in xmap.pas, because **continue** is a reserved word for this compiler.

1.2.2 /gen/src directory

- continue $\Longrightarrow$ ccontinue
- The declaration

  VAR i:integer;

  has been inserted in the declaration part of the procedure **checkzero** in linkmap.pas and mlink.pas.

1.2.3 /thg/src directory

- continue $\Longrightarrow$ ccontinue
- The source files clodscore.pas, cilink.pas and cmap.pas contain the procedures **segma** and **segpa**. In these procedures assignments of the form

  ma1:=haplotypes[second,1]

  were rejected by the compiler although being syntactically correct. To overcome this problem the declaration

  zwischenlager:happair

  has been added to the variable declaration part of the procedures in question. Than the crucial assignments have been splitted in (e. g. segma)

  zwischenlager:=haplotypes[second];
  ma1:=zwischenlager[1];
  ma2:=zwischenlager[2]; .

1.2.4 /uip/lcp/src directory

In order to run LCP in a proper mode the unxh.c file has to be treated by the following possibilities:

- Take the unxh.sy5 version and insert

  #define _ALL_SOURCE
  #define _NO_PROTO

  right in front of the #include-statements.

- Take the unxh.c version as distributed in LINKAGE 5.2 at the Columbia FTP site, insert

  #define _ALL_SOURCE
  #define _NO_PROTO

  right in front of the #include-statements and set

  nsch.t_brkc=1; .

1.2.5 /uip/ldp/src directory

- In the makeped.c file the statement

  #define version 2.1

  has been pushed behind

  #include <stdio.h>
  #include <ctype.h> .

- In line 369 of the preplink.pas source

  OTHERWISE;

  has been added.

1.2.6 /uip/llb/lnk/src directory

In the time.c file

#include <sys/time.h>

has been modified to

#include <time.h> .

1.2.7 /uip/llb/lsm/src directory

The unxh.c file has been adjusted according to the second possibility mentioned in 1.2.4.

1.2.8 /uip/lrp/src directory

In the mscr.c file

#define _POSIX_SOURCE

has been inserted right in front of the #include-statements.