NAME

    X509_ALGOR_dup, X509_ALGOR_set0, X509_ALGOR_get0, X509_ALGOR_set_md,
    X509_ALGOR_cmp, X509_ALGOR_copy - AlgorithmIdentifier functions

SYNOPSIS

    #include <openssl/x509.h>

    X509_ALGOR *X509_ALGOR_dup(X509_ALGOR *alg);
    int X509_ALGOR_set0(X509_ALGOR *alg, ASN1_OBJECT *aobj, int ptype, void *pval);
    void X509_ALGOR_get0(const ASN1_OBJECT **paobj, int *pptype,
            const void **ppval, const X509_ALGOR *alg);
    void X509_ALGOR_set_md(X509_ALGOR *alg, const EVP_MD *md);
    int X509_ALGOR_cmp(const X509_ALGOR *a, const X509_ALGOR *b);
    int X509_ALGOR_copy(X509_ALGOR *dest, const X509_ALGOR *src);

DESCRIPTION

    X509_ALGOR_dup() returns a copy of **alg**.

    X509_ALGOR_set0() sets the algorithm OID of **alg** to **aobj** and the associated parameter type to **ptype**
    with value **pval**. If **ptype** is **V_ASN1_UNDEF** the parameter is omitted, otherwise **ptype** and **pval** have
    the same meaning as the **type** and **value** parameters to **ASN1_TYPE_set()**. All the supplied parameters
    are used internally so must **NOT** be freed after this call.

    X509_ALGOR_get0() is the inverse of **X509_ALGOR_set0()**: it returns the algorithm OID in ***paobj**
    and the associated parameter in ***pptype** and ***ppval** from the **AlgorithmIdentifier alg**.

    X509_ALGOR_set_md() sets the **AlgorithmIdentifier alg** to appropriate values for the message digest
    md.

    X509_ALGOR_cmp() compares **a** and **b** and returns 0 if they have identical encodings and nonzero
    otherwise.

    X509_ALGOR_copy() copies the source values into the dest structs; making a duplicate of each (and
    free any thing pointed to from within *dest).

RETURN VALUES

    X509_ALGOR_dup() returns a valid **X509_ALGOR** structure or NULL if an error occurred.

    X509_ALGOR_set0() and **X509_ALGOR_copy()** return 1 on success or 0 on error.

X509_ALGOR_get0() and **X509_ALGOR_set_md()** return no values.

X509_ALGOR_cmp() returns 0 if the two parameters have identical encodings and nonzero otherwise.

HISTORY

The **X509_ALGOR_copy()** was added in 1.1.1e.

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