

Caches ¶

Data structure

```

/* Caches */
typedef struct _nandfs_cache_cell {
    uint hits;
    time_t ctime;
    bool dirty;
    bool uptodate;
    void *priv;
} nandfs_cache_cell;

typedef struct _nandfs_cache {
    uint rows, cols;
    uint hits, miss;
    nandfs_cache_cell **cells;
    struct _nandfs *fs;
    /* Return a the row for this priv */
    uint (*key)(struct _nandfs_cache *cache, void *priv);
    int (*flush)(struct _nandfs_cache *cache, void *priv);
    int (*add)(struct _nandfs_cache *cache, void *priv);
    int (*load)(struct _nandfs_cache *cache, void *priv);
    /* Return true if a is b */
    bool (*cmp)(void *a, void *b);
    int (*init_cell)(struct _nandfs_cache *cache, nandfs_cache_cell *cell);
    void (*free_cell)(struct _nandfs_cache *cache, nandfs_cache_cell *cell)
} nandfs_cache;

```

Interface

```
int nandfs_load_chunk(nandfs *fs, nandfs_chunk *chunk);
```

Load a chunk into cache. chunk->data will contain chunk data, it must point to a fs->vpage_size buffer.

```
int nandfs_cache_add_chunk(nandfs *fs, nandfs_chunk *chunk);
```

Add a chunk to cache

```
int nandfs_cache_add_written_chunk(nandfs *fs, nandfs_chunk *chunk);
```

Add a chunk to cache, but set the cell uptodate

```
void nandfs_set_chunk_dirty(nandfs *fs, nandfs_chunk *chunk);
```

If the chunk was cached, set the cell dirty

```
int nandfs_flush_all_chunks(nandfs * fs);
```

Flush all cached chunks

```
int nandfs_cache_add_header(nandfs *fs, nandfs_object *obj);
```

Add an header to the cache

```
int nandfs_flush_all_headers(nandfs * fs);
```

Flush all cached headers

```
void nandfs_set_header_dirty(nandfs *fs, nandfs_object *obj);
```

If the header was cached, set the cell dirty.

```
int nandfs_flush_old_files(nandfs * fs);
```

Flush all old files (chunks and header).

```
void nandfs_set_file_chunks_dirty(nandfs *fs, nandfs_object *obj);
```

Set all chunk dirty for this file.

```
int nandfs_flush_file(nandfs * fs, nandfs_object * file);
```

Flush this file (chunks and headers)