

On-Line Geometric Modeling Notes

**THE SUPPORT OF A
NORMALIZED B-SPLINE BLENDING FUNCTION**

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Overview

A B-spline blending function $N_{i,k}(t)$ has compact support. This means that the function is zero outside of some interval. In these notes, We find this interval explicitly in terms of the knot sequence.

The Support of the Function

Given an order k , and a knot sequence $\{t_0, t_1, t_2, \dots, t_{n+k}\}$, the normalized B-spline blending function $N_{i,k}(t)$ is positive if and only if $t \in [t_i, t_{i+k})$.

